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FOR THE

NORTHWEST ATLANTIC FISHERIES

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SAMPLING YEARBOOK

Vol. 3

for the year

1958

Issued from the Headquarters of the Commission
Halifax, N. S., Canada
1960

INTERNATIONAL COMMISSION

FOR THE

NORTHWEST ATLANTIC FISHERIES

SAMPLING YEARBOOK VOLUME 3

for the year 1958

Edited by

RONALD S. KEIR

Issued from the Headquarters of the Commission
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NORTHWEST ATLANTIC FISHERIES

SAMPLING YEARBOOK VOLUME 3

1958

Edited by RONALD S. KEIR

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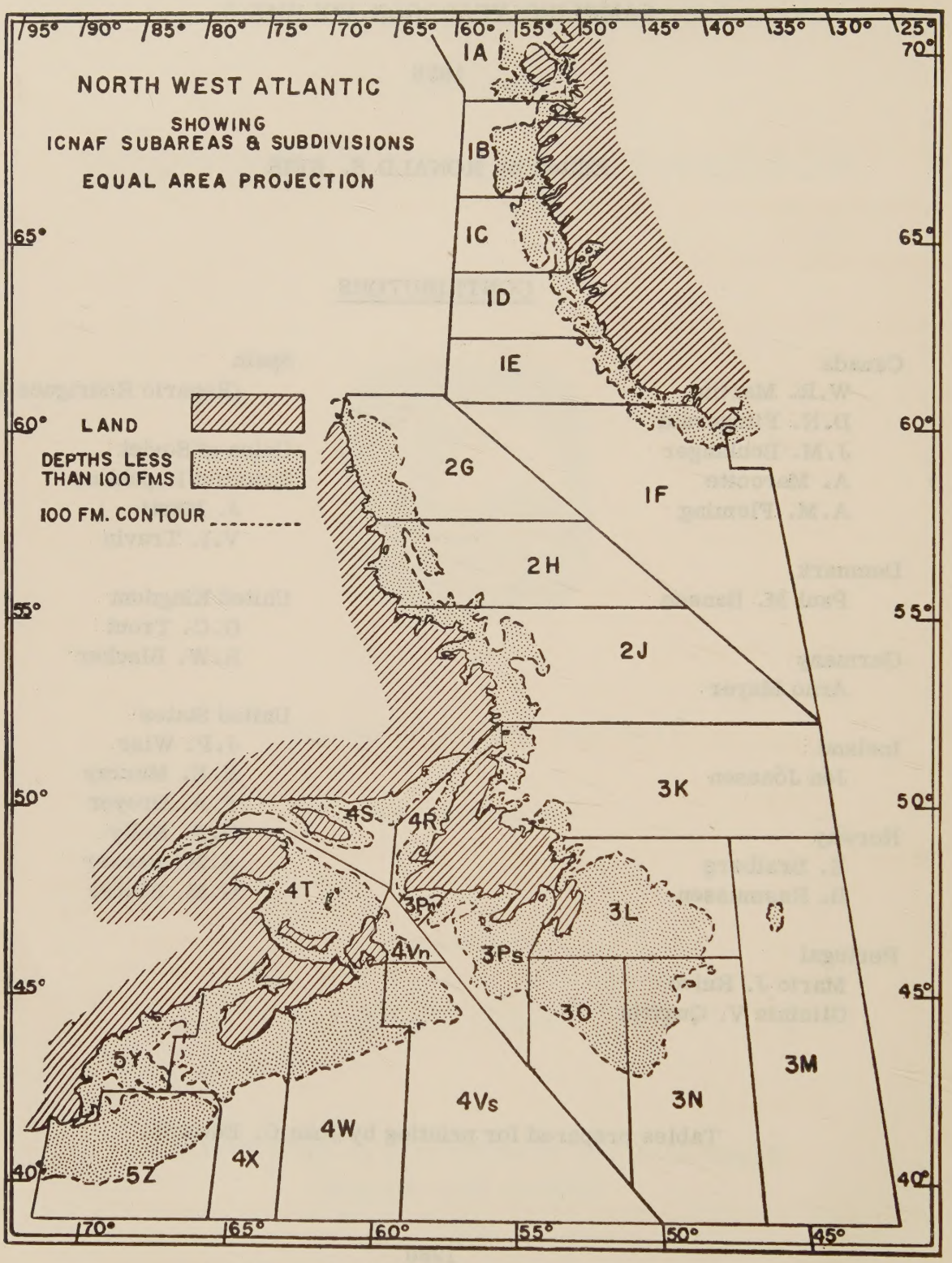
1960



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INTRODUCTION

by Ronald S. Keir

The Sampling Yearbook summarises annually the data on lengths, ages and weights of the cod, haddock, redfish, and other groundfish species, which have been collected to further the investigations on the fisheries and fish stocks of the Northwest Atlantic. This volume includes tables of all the length frequencies of samples taken in 1958 from commercial landings or catches and, for some countries, of the catches of research vessels. Age frequency data have also been reported by several countries. Similar data for years prior to 1958, which were not available for publication in the first two volumes of the Sampling Yearbook, are reported in a special section of this volume.

Samples are taken either on shore from the commercial landings or at sea from the catches of commercial or research vessels. Where the commercial vessel catch is sampled at sea, samples may be taken before or after discarding of the small, unmarketable fish. In sampling the landings, samples are usually taken from each of the size categories in which the fish are landed, and the overall length frequency estimated by pooling the samples after weighting by the quantity of fish landed in each size category. As sampling practices vary among countries, some further "Notes on the Sampling Data" are given on pages 13-17.

It is the intention of the Commission that the data incorporated in the Sampling Yearbook should be readily intercomparable. To this end the Commission proposed that the fork length recorded to the nearest centimetre be adopted as the standard measure. It further recommended that length measurements should be reported by 3-centimetre groups for the cod and by 2-centimetre groups for the haddock. Only two methods of measuring fish are now in common use in the Convention Area: the one is the standard measure noted above, which is extensively used in Subareas 2, 3, 4, and 5; the other is the total length measured to the centimetre below, which is used by a few of the countries fishing in Subarea 1. Measuring to the total length gives a greater length than the standard, but this is compensated to some extent by measuring to the centimetre below, which gives a lesser length. Because of the very small differences involved and the limited data available to establish conversion factors, no conversions to standard measure have been made.

In order to make the data more accessible, the tables of the Sampling Yearbook have been arranged in the following order.

1. All tables on years prior to 1958 are given in a separate section.

2. The 1958 tables are arranged by species in the order cod, haddock, redfish, and flounder, with a separate section for each species.

3. Blue pages at the beginning of a section give a guide to the tables in that section.

4. Within a species section length frequencies are given first, followed by age frequencies, age/length keys and age/length compositions and, finally, length/weight tables.

Length and age frequencies and age/length compositions are generally given in parts per thousand but, in some cases (notably the U.S. data for Subarea 5 haddock landings), as the total numbers landed. Age/length keys are given as the actual numbers of otoliths read, except for the U.S. haddock, where the keys are given as the percentage age distribution of each length group.

Data are frequently reported separately for the sexes and are so published.

Length/weight data are reported as mean weight at each length.

For each length frequency the following data are reported if available.

Serial Numbers:	The serial numbers (as given by the scientist reporting the data) of the samples on which the length frequencies are based.
Number of Samples:	The number of samples on which the length frequency is based.
Number Fish Measured:	The total number of fish measured in all the samples on which the length frequency is based.
Mean Length (cm.):	The estimated mean length of the catch or landings represented by the length frequency. Only given if reported to the Secretariat.
Mean Weight (kg.):	Given as round, fresh weight unless otherwise noted. This weight may have been calculated from the length frequency and a weight/length table.

Total Wt. Landed (Tons): The total commercial landings as reported in the ICNAF Statistical Bulletin for the month/subdivision, gear and country to which the length frequency refers.

Estimated No. (millions): This figure is calculated by dividing the total weight landed by the mean weight.

Mesh or Hook Size: The mesh size is given in inches or millimetres and is the internal, stretched diameter of the wet, used mesh unless otherwise stated. Hook sizes are given as the code numbers by which the hooks are sold.

Range of Depths: Given in fathoms (fm.) or metres (m.). For landings, the depths are given at which fishing has taken place on the trip from which the samples were taken. For catches sampled at sea, the depths are given of the individual sets from which the samples were taken.

The amount of sampling on which the length frequencies and other tables are based is generally small and the tables should therefore be used with caution. In many cases, sampling from different depth zones, and possibly different stocks, in a subdivision are pooled. The number of decimals in the tables is frequently greater than justified by the data. Similarly, the mean weight of the fish and the estimated number of fish landed, etc., are often given to a larger number of decimals than justified by the data or by the conversion factors used; for example, the conversion factor of 1.2 used to convert from gutted weight to round, fresh weight may be considered to introduce an error of approximately $\pm$ 5 per cent.

Weights are always recorded in metric tons round, fresh (i.e. the nominal catch), except where otherwise noted. The conversion factors used are the same as those used in the ICNAF Statistical Bulletins (see Vol. 5, 1955, page 13). The most commonly used are:

1.2 for cod and haddock, gutted, head on
3.0 for cod and haddock, green salted, landed in Europe
2.7 for cod and haddock, green salted, landed in North America or Greenland

In addition to the regular sampling of the commercial and research vessel catches, a number of special series of data are collected by member countries. Two of these are included here: one is a series of samples reported by Canada to measure the quantity and sizes of the cod and haddock discarded at sea (pages 52, 53, 123, 124), and the other is a continuation of a series of redfish length frequencies which can be used to measure the growth rate of the redfish in certain inshore areas of Greenland (Denmark, page 144).

NOTES ON THE SAMPLING DATA

Canada (Maritimes and Quebec) — Reported by W.R. Martin, D.N. Fitzgerald, J.M. Boulanger, and J. Marcotte

Commercial landings of groundfish in the provinces of Nova Scotia, New Brunswick and Prince Edward Island have been continuously sampled for size and age composition since 1945. Sampling emphasis has been placed on landings by offshore vessels at the largest groundfish ports, but has also included sampling from the inshore fleets. Length frequencies from routine sampling of the commercial landings and from sampling to measure discarding are reported to the Commission. Age frequency data are not at present reported.

Landings are normally culled by market categories. Cod are divided into Large (Steak) and Medium (Market) sizes at about 10 pounds fresh, gutted weight. Small (Scrod) cod and haddock are mainly less than 2-1/2 pounds gutted weight. Small round haddock are sometimes landed in a separate market category. These market categories are sampled approximately in proportion to the relative numbers of each in a trip landing. When the final weighout is available, the length frequency of the landings is determined by applying weighting factors to each category. The length frequencies of the sexes are not usually given separately.

Fork length measurements were recorded to the nearest centimetre for each fish. These measurements were reported by 3-centimetre groups for cod and 2-centimetre groups for haddock. Mesh size is recorded as the approximate inside stretched wet used measurement of an average codend mesh. Hook size is given by number, No. 17 or 6/0 being the smallest commercial groundfish hook, and No. 12 being the large hook used on baited handlines.

Canada (Newfoundland) — Reported by A.M. Fleming

Length frequencies based on sampling of the commercial landings of cod, haddock, redfish, and American plaice in 1958 have been reported, along with length frequencies of redfish, American plaice and witch for earlier years (1955-1957).

Length measurements were made of the fork length and recorded to the nearest centimetre. Sampling was carried out on shore. The total weight of each sample was obtained, together with the total weight of the species landed

from the trip sampled. By means of the weighting factor determined from these data each sample frequency was raised to give the actual numbers of each size in the landings sampled. These raised frequencies were then pooled to give length frequencies by quarters (January-March, etc.), type of gear and subdivision, and then compiled in 3-centimetre groups (0-2 cm., etc.).

The 4-inch mesh size recorded for traps is to be considered a minimum.

Denmark — Reported by Paul M. Hansen

Samples of cod were taken from the catches of inshore commercial gears and from the offshore catches of research vessels. The samples were not pooled. Length measurements were made of the total length (end of tail lobes) and recorded to the nearest centimetre below.

A special series of redfish length samples, taken at intervals of one to three months from Godthåb and Tunugdliarfik Fjords (since 1952 in the case of Godthåb Fjord), have been published in the ICNAF Sampling Yearbooks. These samples are of small redfish and permit the study of the growth rate, using Petersen's method, as discussed in the Danish Research Report for 1956, ICNAF Annual Proceedings, Vol. 7. The samples taken in 1958 are reported in this volume. Measurements were made of the total length and recorded to the centimetre below. These measurements have not been adjusted to the nearest centimetre nor to the fork length.

Germany — Reported by Arno Meyer

Age and length frequencies and age/length keys of the 1958 landings of cod and haddock by commercial otter trawlers and of the catches of the "Anton Dohrn" have been reported. Length frequencies of the 1958 landings of redfish have already been published in Sampling Yearbook Vol. 2. Length measurements were made of the total length (end of tail lobes) and recorded to the centimetre below. The length frequencies were reported to the Commission in standard 3-centimetre groups.

Where sampling of cod was carried out on shore at the market, each of the three size categories landed was sampled separately, and the final length frequency calculated by weighting each length frequency by the quantity landed in the size category from which it was taken and then pooling the frequencies. The cod from the commercial landings were gutted before being measured; the redfish were round, except for a few of the larger ones.

Samples of otoliths were taken, stratified according to length of fish.

The age/length key constructed from these data and the length frequencies were used to estimate the age distribution of the landings.

Iceland — Reported by Jón Jónsson

The ages, lengths and sexes of samples of cod taken in Subareas 1, 2 and 3 on survey cruises were reported to the Commission. Length measurements were made of the total length recorded to the nearest centimetre, and compiled in 3-centimetre groups (0-2 cm., etc.).

Individual length frequencies of redfish samples taken on two survey cruises in Subareas 2 and 3 in 1958 were reported to the Commission. A summary of these by month/subdivisions is published here.

Norway — Reported by E. Bratberg and B. Rasmussen

The length and age frequencies by sexes of samples of the commercial bottom longline catch of cod in Subdivisions 1C and 1D were reported.

Measurements were made of the fork length to the nearest centimetre. Lengths were reported in standard 3-centimetre groups.

Portugal — Reported by Mario J. Ruivo and Glicinia V. Quartin

Sampling at sea of the cod catches (before discarding undersized fish) of the Portuguese otter trawlers and dory vessels has been carried out in 1958 in Subareas 1, 2, 3, and 4. Length frequencies, age frequencies (based on otoliths), and the mean size at each age by sexes were included in the data reported.

Length measurements were made of the fork length recorded to the nearest centimetre and were compiled in 5-centimetre groups (0-4 cm., etc.), but these were converted to 3-centimetre groups for publication. Samples were not weighted by the quantity caught; when taken on the same fishing bank at the same time, they were generally pooled.

Samples from cod catches taken in 1955-1957 from Subarea 3 are also included in this volume. Note that the 1955 and 1956 samples were taken after discarding undersized fish.

Spain — Reported by Olegario Rodriguez M.

Length frequencies of the cod catches of Spanish otter trawlers collected at sea for the year 1958 were reported. Samples were taken from the commercial catch before discarding.

Length measurements were made of the fork length recorded to the nearest centimetre. Length frequencies were reported in the standard 3-centimetre groups as used by ICNAF. Samples were not weighted according to the quantity caught, but were pooled by month/subdivisions.

Union of Soviet Socialist Republics — Reported by J. Marti and V.I. Travin

The age frequencies and the length frequencies of cod and redfish catches were reported. Samples were taken at sea, before discarding, from the catches of commercial otter trawlers. Cod length frequencies were reported in 5-centimetre groups (16-20 cm., etc.), but were converted to 3-centimetre groups before publication. Redfish length frequencies were reported in 2-centimetre groups.

United Kingdom — Reported by G.C. Trout and R.W. Blacker

The length composition of the cod landings of the United Kingdom otter trawlers from Subarea 1 was reported. Measurements were made of the total length to the centimetre below. Samples were taken from each of the size categories into which the landings were divided; the length frequencies so obtained were then pooled, after weighting by the quantity of fish in the category from which they were taken.

Cod length and age frequencies were also reported for the years 1952-1957.

United States

The age/length composition of the United States landings of haddock for 1958 and the length composition of the landings of cod and redfish are included in this volume. All measurements were made of the fork length to the nearest centimetre.

Compilation of Data

(a) Cod: Subarea 5, Otter Trawlers — Reported by J.P. Wise and H.E. Murray

Each length frequency sample was weighted by the weighout of the landing from which it was obtained (by market category for large, market, scrod; by total cod for mixed). The resulting length frequencies of sample landings were totalled and weighted by total United States cod landings for otter trawlers by month. These numbers were in turn combined into length frequencies for total United States otter trawl cod landings for each month. The percentage of fish for each centimetre interval was then computed; these percentages were then combined into 3-centimetre groups, and finally converted to parts per thousand.

(b) Haddock — Reported by J.P. Wise and F.A. Dreyer

The length frequency samples for each month by market category were pooled and the resulting frequency weighted by the total quantity of each category landed from each unit area. The weighted numbers of fish of each category were then pooled to obtain the total length frequency for haddock for each month for each subdivision. The age frequencies were determined from the length frequencies and age/length keys constructed from sub-samples of the original samples. Ages were determined from the scales. The resulting age/length composition expresses the total removals of haddock from the subdivision for the particular month.

Haddock biostatistical records are maintained by the "haddock year": namely, February 1st to January 31st of the following year. The haddock's birthday is taken as February 1st.

(c) Redfish — Reported by G.F. Kelly, A.M. Barker, and G.M. Clarke

Samples were taken from the commercial catches and were pooled without weighting.

DATA FROM YEARS PRIOR TO 1958

Guide to Tables

The numbers in the guide are page numbers. For a length frequency reference the page number alone is given. For an age frequency the page number is followed by A. For an age frequency with mean size at each age, the page number is followed by A'. For an age/length key or frequency the page number is followed by K. For a weight/length table the page number is followed by W. For discard experiments the page number is followed by D.

PAGE NUMBERS

Species	Year	ICNAF Subdivision	OTTER TRAWL				HOOK & LINE AND OTHER GEAR			
			Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
COD	1952	Subarea 1	- - - - - - - 24,26K - - - - - - -							
	1953	Subarea 1	- - - - - - - 24,26K - - - - - - -							
	1954	Subarea 1	- - - - - - - 25,26K - - - - - - -							
	1955	3L							21	21
		3N			21					
		Subarea 1	- - - - - - - 25,26K - - - - - - -							
	1956	3K				22				
		3L		22	22	22				
		3L-P			27W	27W				
	1957	3L			27W,23			23	23	23
		3O						23	23	
		Subarea 1	- - - - - - - - 26K - - - - - - -							
REDFISH	1955	3N				28				
		3P	28	28	28					
		4R		29	29					
		4S			29					
	1956	3N			30	30				
		3P south	30	30	31	31				
		4R		31	31					
		4S		32	32	32				
		4T			32					
	1957	3N			33	33				
		3P				33				
		4R		34	34	34				
		4S		35	35	35				
AMERICAN PLAICE	1955	3L	36	36	36	36				
		3N	37		37	37				
		3P		37						
	1956	3L		38	38	38				
		3N			39	39				
	1957	3L		40	40	40				
		3N			40	41				
		3O		41						
		3P	41							

(cont'd.)

(cont'd.)

PAGE NUMBERS

Species	Year	ICNAF Subdivision	OTTER TRAWL				DANISH SEINE			
			Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
WITCH	1955	3N				42				
		3O	42							
		3P					42	43	43	43
		4V		42					43	
	1956	3O				44				
		3P					44	45		
		4R						45	45	
		4V		44						
	1957	3O	46	46						
		4R						46	46	

TABLE 1 PORTUGAL - 1955/57 LENGTH FREQUENCIES - COD

by Mario Ruivo
Glicinia V. Quartin

Commercial Catches after Discarding 1955

	Line		Trawl
Subdivision	3L		3N
Month	September	October	August
3-cm. group	FREQUENCIES in °/oo		
30-32	-	-	12
33-35	-	-	8
36-38	-	-	17
39-41	-	3	54
42-44	1	5	99
45-47	9	8	116
48-50	13	35	83
51-53	12	28	112
54-56	34	38	112
57-59	46	90	103
60-62	82	78	74
63-65	128	108	83
66-68	117	85	50
69-71	162	128	33
72-74	102	135	37
75-77	75	40	4
78-80	56	55	-
81-83	48	70	-
84-86	29	20	-
87-89	17	5	-
90-92	28	35	-
93-95	15	18	-
96-98	3	8	-
99-101	6	5	-
102-104	12	8	4
105-107	3	-	-
108-110	2	-	-
Total °/oo	1000	1005	1001
Serial Numbers			
Number of Samples	5	1	1
Number Fish Measured	2083	400	242
Mean Length (cm.)			
Mean Weight (kg.)			
Total Wt. Landed (Tons)	7297	1683	199
Estimated No. (millions)			
Mesh or Hook Size	#14 ½	#14 ½	117 mm.
Range of Depths (fm.)			

(cont'd.)

TABLE 1 PORTUGAL - 1955/57 LENGTH FREQUENCIES - COD by Mario Ruivo
(cont'd.) Glicinia V. Quartin

OTTER TRAWLERS - Commercial Catches after Discarding 1956

Subdivision	3K	3L				
Month	November	April	July	August	October	December
3-cm. group	FREQUENCIES in °/oo					
39-41	3	8	-	-	2	3
42-44	-	13	8	3	6	10
45-47	8	40	16	8	19	13
48-50	20	95	40	19	40	65
51-53	55	48	36	35	74	65
54-56	88	53	74	79	81	55
57-59	133	90	152	123	98	100
60-62	191	112	162	174	135	70
63-65	221	147	170	207	191	70
66-68	136	135	114	123	115	85
69-71	75	113	52	83	75	118
72-74	33	63	42	74	61	133
75-77	23	28	26	38	35	85
78-80	10	30	42	10	26	50
81-83	-	12	32	9	16	30
84-86	3	8	14	4	5	13
87-89	-	2	6	4	7	8
90-92	-	-	4	2	5	18
93-95	-	-	8	3	4	5
96-98	-	-	2	-	4	-
99-101	3	-	-	-	1	5
102-104	-	-	-	2	-	3
105-107	-	2	-	-	-	-
Total °/oo	1002	999	1000	1000	1000	1004
Serial Numbers						
Number of Samples	2	6	2	5	5	2
Number Fish Measured	398	600	500	1199	1000	400
Mean Length (cm.)						
Mean Weight (kg.)						
Total Wt. Landed (Tons)	1360	5359	1524	5633	3484	2647
Estimated No. (millions)						
Mesh Size (mm.)	117	117	117	117	117	117
Range of Depths (fm.)						

(cont'd.)

TABLE 1 PORTUGAL - 1955/57 LENGTH FREQUENCIES - COD by Mario Ruivo
(cont'd.) Glicinia V. Quartin
Commercial Catches before Discarding 1957

	Trawl		Line					
Subdivision	3L		3L				3O	
Month	August	Sept.	May	June	Sept.	Oct.	May	Sept.
3-cm. group	FREQUENCIES in °/oo							
30-32	2	-	-	-	-	-	-	-
33-35	2	1	-	-	-	-	-	-
36-38	12	4	-	-	-	-	-	-
39-41	22	15	-	-	-	-	-	-
42-44	24	7	-	-	-	-	-	-
45-47	36	13	-	-	-	40	-	-
48-50	51	54	5	-	10	10	-	-
51-53	71	35	15	10	40	70	5	-
54-56	70	58	15	70	101	80	5	-
57-59	124	87	20	50	71	100	5	20
60-62	126	159	30	80	121	240	15	20
63-65	109	181	30	110	111	60	25	51
66-68	128	138	50	110	131	110	15	10
69-71	68	92	135	120	71	60	45	71
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81-83	15	16	60	30	40	10	100	20
84-86	7	6	80	10	20	-	160	20
87-89	2	6	15	30	51	10	88	10
90-92	2	1	55	20	20	10	50	20
93-95	3	3	35	10	-	-	53	30
96-98	-	-	20	10	10	-	30	61
99-101	2	-	35	20	10	-	30	20
102-104	-	-	15	20	-	-	15	71
105-107	-	-	10	10	10	-	8	192
108-110	-	-	10	10	-	-	13	101
111-113	-	-	-	-	-	-	15	20
114-116	2	-	5	10	-	-	20	61
117-119	-	-	-	-	-	-	3	20
120-122	2	-	5	-	-	-	3	61
123-125	-	-	-	-	-	-	5	10
126-128	-	-	5	-	-	-	-	10
-	-	-	-	-	-	-	-	-
>131	-	-	-	10	-	-	6	10
Total °/oo	1002	998	1000	1000	999	1000	1005	999
Serial Numbers								
Number of Samples	4	6	2	1	1	1	4	1
Number Fish Measured	588	686	200	100	99	100	400	99
Mean Length (cm.)								
Mean Weight (kg.)								
Total Wt. Landed (Tons)	9106	4393	3862	3807	2768	1750	7311	
Estimated No. (millions)								
Mesh or Hook Size	117 mm.	117 mm.	#14½	#14½	#14½	#14½	#14½	#14½
Range of Depths(fm.)								

TABLE 2 UNITED KINGDOM - 1952/55 LENGTH FREQUENCIES - COD by G.C. Trout R.W. Blacker

OTTER TRAWLERS Subarea 1

Year	1952[1]			1953[1]		
3-cm. group	Total No. Caught (Thousands)	°/oo	No. per 100 Hours Fishing	Total No. Caught (Thousands)	°/oo	No. per 100 Hours Fishing
36-38	-	-	-	1	-	1
39-41	-	-	-	7	1	33
42-44	-	-	-	11	1	49
45-47	127	6	650	73	6	323
48-50	355	18	1817	146	12	653
51-53	811	41	4150	294	25	1312
54-56	938	48	4804	520	44	2323
57-59	1002	51	5131	633	53	2828
60-62	1997	101	10229	1224	102	5467
63-65	2183	111	11181	1274	107	5689
66-68	2555	130	13085	1374	115	6135
69-71	2669	136	13667	1576	132	7036
72-74	2726	139	13957	1676	140	7487
75-77	1412	72	7231	1194	100	5332
78-80	1170	59	5992	963	81	4298
81-83	686	35	3515	500	42	2231
84-86	449	23	2301	256	21	1144
87-89	331	17	1694	134	11	600
90-92	109	6	556	39	3	174
93-95	81	4	417	28	2	123
96-98	27	1	139	5	-	22
99-101	23	1	117	2	-	7
102-104	20	1	106	-	-	-
105-107	-	-	1	1	-	7
108-110	-	-	1	1	-	5
111-113	-	-	1	1	-	2
114-116	-	-	-	-	-	1
117-119	-	-	-	-	-	-
120-122	1	-	7	1	-	2
123-125	1	-	5	1	-	2
126-128	1	-	2	1	-	2
129-131	1	-	5	1	-	2
132-134	1	-	7	1	-	2
135-137	2	-	8	-	-	1
138-140	2	-	7	1	-	5
141-143	1	-	5	3	-	13
>143	-	-	5	2	-	9
Total	19681	1000	100793	11944	998	53320
Number of Samples						
Number Fish Measured						
Mean Length (cm.)						
Mean Weight (kg.)		2.8			2.7	
Total Wt. Landed (Tons)		55455			32634	
Estimated No. (millions)						
Mesh or Hook Size						
Range of Depths (fm.)						

1) Age/Length Composition on page 26.

(cont'd.)

TABLE 2 UNITED KINGDOM - 1952/55 LENGTH FREQUENCIES - COD by G.C. Trout
(cont'd.) R.W. Blacker

OTTER TRAWLERS Subarea 1

Year	1954			1955[1]		
3-cm. group	Total No. Caught (Thousands)	°/oo	No. per 100 Hours Fishing	Total No. Caught (Thousands)	°/oo	No. per 100 Hours Fishing
39-41	2	-	19	-	-	-
42-44	3	1	29	-	-	-
45-47	49	9	439	10	8	381
48-50	92	17	828	26	21	975
51-53	178	33	1608	59	48	2162
54-56	214	40	1942	74	61	2695
57-59	233	43	2108	81	66	2962
60-62	395	74	3579	115	94	4188
63-65	418	78	3786	117	96	4271
66-68	464	87	4201	121	99	4438
69-71	465	87	4206	94	77	3458
72-74	465	87	4208	81	66	2968
75-77	622	116	5626	89	73	3270
78-80	571	107	5164	83	68	3038
81-83	469	88	4240	70	57	2575
84-86	288	54	2603	70	57	2579
87-89	197	37	1784	70	57	2581
90-92	92	17	835	32	26	1171
93-95	75	14	674	23	19	850
96-98	39	7	353	5	4	209
99-101	16	3	148	2	2	70
102-104	5	1	46	-	-	-
105-107	2	-	15	-	-	-
108-110	1	-	10	-	-	-
-	-	-	-	-	-	-
120-122	1	-	9	-	-	-
123-125	1	-	6	-	-	-
Total	5357	1000	48466	1222	999	44841
Serial Numbers						
Number of Samples						
Number Fish Measured						
Mean Length (cm.)						
Mean Weight (kg.)		3.3			4.1	
Total Wt. Landed (Tons)		17916			5044	
Estimated No. (millions)						
Mesh or Hook Size						
Range of Depths (fm.)						

1) Age/Length Composition on page 26.

TABLE 3 UNITED KINGDOM - 1952/57 AGE/LENGTH COMPOSITION - COD by G.C. Trout R.W. Blacker

1952 OTTER TRAWLERS Subarea 1

Year-Class	1949	'48	'47	'46	'45	'44	'43	'42	'40	'39	'37	'36	'35	'34	'30	Total
Age-Group	III	IV	V	VI	VII	VIII	IX	X	XII	XIII	XV	XVI	XVII	XVIII	XXII	
10-cm.group	NUMBERS CAUGHT PER 100 HOURS FISHING															
40-49	114	342	571	57	-	-	-	-	-	-	-	-	-	-	-	1084
50-59	-	-	7139	2379	5711	-	238	-	-	-	-	-	-	-	-	15467
60-69	-	-	427	854	33307	2562	1495	213	-	-	-	-	-	-	-	38858
70-79	-	-	-	-	21392	6791	4414	2377	-	340	-	-	-	-	-	35314
80-89	-	-	-	-	1085	1085	1085	2531	1085	362	362	362	362	362	-	8681
>89	-	-	-	-	-	139	-	416	-	-	-	277	277	139	139	1387
Total	114	342	8137	3290	61495	10577	7232	5537	1085	702	362	639	639	501	139	100791
Age Freq.	1	3	81	33	610	105	72	55	11	7	4	6	6	5	1	1000

1953 OTTER TRAWLERS Subarea 1

Year-Class	1948	1947	1946	1945	1944	1943	1942	1941	1940	1939	1938	1937	1936	Total
Age-Group	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV	XVI	XVII	
10-cm. group	NUMBERS CAUGHT PER 100 HOURS FISHING													
50-59	247	4439	1850	863	123	-	-	-	-	-	-	-	-	7522
60-69	-	2940	3618	11308	1131	226	113	-	-	-	-	-	-	19336
70-79	-	360	1920	10562	3361	2281	1920	720	240	-	-	-	-	21364
80-89	-	-	286	715	857	1000	1072	286	72	72	72	143	143	4718
>89	-	-	-	27	27	27	27	54	54	-	109	54	-	379
Total	247	7739	7674	23475	5499	3534	3132	1060	366	72	181	197	143	53319
Age Freq.	5	145	144	440	103	66	59	20	7	1	3	4	3	1000

1955 OTTER TRAWLERS Subarea 1

Year-Class	1950	1949	1948	1947	1946	1945	1944	1943	1942	1941	1940	1939	Total
Age-Group	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV	XVI	
10-cm. group	NUMBERS CAUGHT PER 100 HOURS FISHING												
45-49	477	79	-	79	-	-	-	-	-	-	-	-	635
50-59	6405	1067	-	1067	-	-	-	-	-	-	-	-	8539
60-69	1307	3921	1307	6535	1307	-	-	-	-	-	-	-	14377
70-79	-	-	-	5198	-	3466	1733	-	-	-	-	-	10397
80-89	-	-	-	-	-	4297	2865	-	1432	-	-	-	8594
90-99	-	-	-	-	-	986	657	-	328	-	-	328	2299
Total	8189	5067	1307	12879	1307	8749	5255	-	1760	-	-	328	44841
Age Freq.	183	113	29	287	29	195	117	-	39	-	-	7	999

1957 OTTER TRAWLERS Subarea 1

Year-Class	1953	1952	1951	1950	1949	1948	1947	1946	1945	1944	1943	1942	Total
Age-Group	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV	
10-cm. group	NUMBERS CAUGHT PER 100 HOURS FISHING												
40-49	425	1063	212	-	-	-	-	-	-	-	-	-	1700
50-59	563	2815	5629	3377	563	-	563	-	-	-	-	-	13510
60-69	-	-	6016	19767	5157	-	2578	859	-	-	-	-	34377
70-79	-	-	538	10769	5384	1615	3769	538	1615	-	-	-	24228
80-89	-	-	-	-	1613	-	538	-	-	-	538	538	3227
>89	-	-	-	-	286	-	96	-	96	-	96	190	764
Total	988	3878	12395	33913	13003	1615	7544	1397	1711	-	634	728	77806
Age Freq.	13	50	159	436	167	21	97	18	22	-	8	9	1000

TABLE 4 PORTUGAL - 1956/57 LENGTH/WEIGHT TABLE - COD by Mario Ruivo
Glicinia V. Quartin

1956 OTTER TRAWLERS Subdivisions 3L-P August-October

Length 3-cm. groups	No. of Fish	Total Weight (Grams)	Mean Weight (Grams)
42-44	1	750	750
45-47	4	3,170	793
48-50	3	3,270	1,090
51-53	8	10,280	1,285
54-56	30	41,800	1,393
57-59	43	75,030	1,745
60-62	54	102,740	1,903
63-65	57	126,820	2,225
66-68	51	127,580	2,502
69-71	37	108,120	2,922
72-74	22	67,170	3,053
75-77	17	61,780	3,634
78-80	10	45,000	4,500
81-83	4	16,670	4,168
84-86	3	15,050	5,017
87-89	2	11,200	5,600
90-92	1	6,570	6,570
93-95	1	7,150	7,150
Total	348	...	...

1957 OTTER TRAWLERS Subdivision 3L

Length 3-cm. groups	No. of Fish	Total Weight (Grams)	Mean Weight (Grams)
36-38	6	2,900	483
39-41	2	1,290	645
42-44	10	7,400	740
45-47	17	15,320	901
48-50	30	32,420	1,081
51-53	19	24,820	1,306
54-56	27	39,800	1,474
57-59	38	65,310	1,719
60-62	36	71,960	1,999
63-65	43	97,570	2,269
66-68	27	69,700	2,581
69-71	22	63,710	2,896
72-74	10	33,430	3,343
75-77	3	10,710	3,570
78-80	3	12,540	4,180
81-83	1	4,270	4,270
84-86	1	5,300	5,300
87-89	1	5,400	5,400
90-92	2	11,480	5,740
93-95	1	6,500	6,500
-	-	-	-
105-107	1	10,090	10,090
Total	300	...	...

TABLE 5 CANADA (Nfld.) - 1955/57 LENGTH FREQUENCIES - REDFISH[1] by A.M. Fleming

OTTER TRAWLERS - Commercial Landings 1955

Subdivision	3N			3P								
Month	October-December			January-March			April-June			July-September		
Sex	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total
cm.	FREQUENCIES in °/oo											
17	-	-	-	-	-	-	1	-	1	-	-	-
18	-	-	-	-	-	-	4	2	6	-	-	-
19	-	-	-	-	-	-	2	4	6	-	-	-
20	-	-	-	-	-	-	7	2	9	-	-	-
21	2	-	2	-	3	3	8	4	12	1	-	1
22	9	2	11	6	3	9	12	6	18	2	-	2
23	12	4	16	3	3	6	22	14	36	2	1	3
24	37	19	56	3	3	6	37	18	55	3	1	4
25	61	36	97	20	3	23	51	33	84	6	4	10
26	71	58	129	9	-	9	37	30	67	10	5	15
27	61	53	114	31	-	31	42	27	69	11	6	17
28	58	62	120	37	3	40	30	23	53	32	11	43
29	39	22	61	133	11	144	38	9	47	48	19	67
30	48	28	76	144	6	150	43	8	51	55	15	70
31	55	24	79	79	11	90	41	13	54	31	16	47
32	25	20	45	14	40	54	38	21	59	35	10	45
33	19	7	26	17	91	108	12	36	48	53	16	69
34	14	24	38	-	125	125	1	50	51	74	30	104
35	4	27	31	-	105	105	4	58	62	67	39	106
36	3	30	33	-	57	57	4	65	69	64	64	128
37	1	25	26	-	28	28	6	51	57	23	60	83
38	-	12	12	-	6	6	1	33	34	9	64	73
39	1	12	13	-	3	3	2	24	26	2	48	50
40	-	6	6	-	-	-	-	12	12	1	35	36
41	-	4	4	-	-	-	2	6	8	-	21	21
42	-	1	1	-	-	-	-	1	1	-	4	4
43	1	1	2	-	-	-	-	1	1	-	2	2
44	-	1	1	-	-	-	1	-	1	-	-	-
45	-	-	-	-	-	-	-	1	1	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
49	-	-	-	-	3	3	-	-	-	-	-	-
50	-	-	-	-	3	3	-	-	-	-	-	-
>50	-	1	1	-	-	-	-	1	1	-	-	-
Total °/oo	521	479	1000	496	507	1003	446	553	999	529	471	1000
Serial Numbers												
Number of Samples		2			1			3			7	
Number Fish Measured	295	268	563	175	178	353	504	620	1124	2098	1707	3805
Mean Length (cm.)												
Mean Weight (kg.)		0.39			0.51			0.46			0.65	
Total Wt. Landed (Tons)		173			841			933			695	
Estimated No. (millions)												
Mesh Size (inches)		2¾ man.			2¾ man.			2¾ man.			2¾ man.	
Range of Depths (fm.)		130-180			90-110			110-180			100-170	

1) No examination was made for marinus-type fish.

(cont'd.)

TABLE 5 CANADA (Nfld.) - 1955/57 LENGTH FREQUENCIES - REDFISH[1] by A.M. Fleming
(cont'd.)

OTTER TRAWLERS - Commercial Landings 1955

Subdivision	4R						4S		
Month	April-June			July-September			July-September		
Sex	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total
cm.	FREQUENCIES in °/oo								
17	1	-	1	-	-	-	-	-	-
18	-	-	-	1	-	1	-	-	-
19	1	-	1	2	1	3	-	-	-
20	-	-	-	1	1	2	1	-	1
21	1	1	2	2	1	3	-	-	-
22	2	-	2	1	1	2	2	-	2
23	2	1	3	4	2	6	-	-	-
24	4	6	10	5	5	10	3	2	5
25	8	7	15	7	3	10	5	4	9
26	15	11	26	12	9	21	10	13	23
27	32	19	51	22	12	34	25	23	48
28	92	48	140	53	22	75	66	51	117
29	126	102	228	78	36	114	75	54	129
30	64	93	157	41	37	78	35	55	90
31	23	50	73	14	18	32	11	34	45
32	10	13	23	14	5	19	8	6	14
33	15	2	17	43	2	45	40	-	40
34	25	2	27	77	2	79	75	1	76
35	24	6	30	79	9	88	79	5	84
36	17	18	35	51	18	69	56	10	66
37	8	23	31	20	43	63	18	37	55
38	2	35	37	7	63	70	6	60	66
39	2	43	45	4	70	74	-	56	56
40	1	32	33	2	59	61	-	40	40
41	-	9	9	-	32	32	-	22	22
42	-	4	4	-	9	9	-	9	9
43	-	1	1	-	1	1	-	1	1
44	-	-	-	-	1	1	-	-	-
Total °/oo	475	526	1001	540	462	1002	515	483	998
Serial Numbers									
Number of Samples		7			14			3	
Number Fish Measured	1335	1418	2753	2832	2448	5280	446	473	919
Mean Length (cm.)									
Mean Weight (kg.)		0.43			0.57			0.52	
Total Wt. Landed (Tons)		824			2453			867	
Estimated No. (millions)									
Mesh Size (inches)		$2\frac{3}{4}$ man.			$2\frac{3}{4}$ man.			$2\frac{3}{4}$ man.	
Range of Depths (fm.)		130-180			124-178			143-170	

1) No examination was made for marinus-type fish.

(cont'd.)

TABLE 5 CANADA (Nfld.) - 1955/57 LENGTH FREQUENCIES - REDFISH[1] by A.M. Fleming
(cont'd.)

OTTER TRAWLERS - Commercial Landings 1956

Subdivision	3N						3P south					
Month	July-September			October-December			January-March			April-June		
Sex	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total
cm.	FREQUENCIES in °/oo											
17	-	-	-	-	-	-	2	-	2	-	-	-
18	-	-	-	-	-	-	1	1	2	-	-	-
19	-	-	-	-	-	-	2	7	9	-	-	-
20	-	-	-	-	-	-	15	7	22	-	-	-
21	3	-	3	-	-	-	21	12	33	-	-	-
22	-	3	3	-	-	-	32	21	53	-	4	4
23	5	5	10	4	7	11	47	33	80	4	4	8
24	31	21	52	25	18	43	41	44	85	7	14	21
25	80	18	98	35	18	53	55	31	86	7	14	21
26	130	23	153	77	18	95	87	46	133	18	60	78
27	135	44	179	70	63	133	77	39	116	7	50	57
28	83	47	130	28	70	98	50	41	91	25	21	46
29	93	29	122	49	32	81	24	58	82	43	11	54
30	75	16	91	35	42	77	9	66	75	82	7	89
31	47	10	57	32	21	53	8	55	63	53	14	67
32	49	5	54	21	28	49	-	32	32	85	14	99
33	13	8	21	7	32	39	1	15	16	35	4	39
34	3	3	6	21	56	77	-	11	11	43	7	50
35	-	5	5	4	42	46	-	4	4	78	7	85
36	3	3	6	-	32	32	-	1	1	85	14	99
37	-	8	8	-	35	35	-	1	1	43	11	54
38	-	-	-	-	35	35	-	1	1	46	28	74
39	-	3	3	-	7	7	-	-	-	25	18	43
40	-	-	-	-	25	25	-	-	-	4	11	15
41	-	3	3	-	14	14	-	1	1	-	-	-
Total °/oo	750	254	1004	408	595	1003	472	527	999	690	313	1003
Serial Numbers												
Number of Samples		1			1			4			1	
Number Fish Measured	289	97	386	116	169	285	555	625	1180	194	88	282
Mean Length (cm.)												
Mean Weight (kg.)		0.34			0.49			0.30			0.54	
Total Wt. Landed (Tons)		72			82			643[2]			1039[2]	
Estimated No. (millions)												
Mesh Size (inches)		2¾ man.			2¾ man.			2¾ man.			2¾ man.	
Range of Depths (fm.)		150-170			160-180			110-120			95-150	

1) No examination was made for marinus-type fish.
2) Includes both 3P north and 3P south.

(cont'd.)

TABLE 5 CANADA (Nfld.) - 1955/57 LENGTH FREQUENCIES - REDFISH[1] by A.M. Fleming
(cont'd.)

OTTER TRAWLERS - Commercial Landings 1956

Subdivision	3P south						4R					
Month	July-September			October-December			April-June			July-September		
Sex	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total
cm.	FREQUENCIES in °/oo											
15	–	–	–	–	–	–	–	–	–	1	–	1
16	–	–	–	–	–	–	–	–	–	2	1	3
17	–	–	–	1	–	1	–	–	–	1	1	2
18	–	–	–	2	–	2	–	1	1	1	–	1
19	–	–	–	–	–	–	1	–	1	1	–	1
20	–	–	–	1	–	1	–	–	–	–	2	2
21	5	–	5	3	–	3	2	1	3	1	1	2
22	7	–	7	7	1	8	–	2	2	1	1	2
23	16	2	18	10	2	12	1	2	3	2	1	3
24	74	10	84	25	6	31	2	3	5	5	1	6
25	97	21	118	25	15	40	5	2	7	6	2	8
26	97	35	132	29	14	43	6	2	8	10	4	14
27	81	64	145	33	20	53	11	7	18	10	3	13
28	56	28	84	27	15	42	17	11	28	17	11	28
29	54	30	84	43	12	55	62	14	76	35	13	48
30	38	25	63	51	14	65	103	41	144	60	32	92
31	13	18	31	56	14	70	61	82	143	56	54	110
32	18	13	31	44	19	63	34	71	105	45	61	106
33	5	25	30	28	30	58	31	35	66	41	28	69
34	3	31	34	31	41	72	54	6	60	65	10	75
35	2	43	45	50	57	107	48	7	55	68	11	79
36	–	35	35	54	57	111	29	17	46	49	28	77
37	2	28	30	32	42	74	6	42	48	20	40	60
38	–	18	18	12	26	38	7	64	71	5	70	75
39	–	5	5	5	18	23	1	40	41	2	61	63
40	–	–	–	1	13	14	–	39	39	–	37	37
41	–	2	2	–	7	7	–	27	27	–	17	17
42	–	–	–	–	2	2	–	2	2	–	6	6
43	–	–	–	–	1	1	–	4	4	–	1	1
44	–	–	–	–	1	1	–	–	–	–	–	–
Total °/oo	568	433	1001	570	427	997	481	522	1003	504	497	1001
Serial Numbers												
Number of Samples		1			8			5			15	
Number Fish Measured	345	262	607	2598	1707	4305	609	643	1252	2931	2727	5658
Mean Length (cm.)												
Mean Weight (kg.)		0.45			0.55			0.62			0.57	
Total Wt. Landed (Tons)		508[2]			463[2]			728			3116	
Estimated No. (millions)												
Mesh Size (inches)		2¾ man.			2¾ man.			2¾ man.			2¾ man.	
Range of Depths (fm.)		95-140			90-150			130-160			103-180	

1) No examination was made for marinus-type fish. (cont'd.)
2) Includes both 3P north and 3P south.

TABLE 5 CANADA (Nfld.) - 1955/57 LENGTH FREQUENCIES - REDFISH[1] by A.M. Fleming
(cont'd.)

OTTER TRAWLERS - Commercial Landings 1956

Subdivision	4S									4T		
Month	April-June			July-September			October-December			July-September		
Sex	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total
cm.	FREQUENCIES in °/oo											
20	-	-	-	-	-	-	4	-	4	-	-	-
21	-	-	-	-	-	-	-	4	4	-	-	-
22	1	-	1	1	1	2	-	-	-	6	-	6
23	1	-	1	-	1	1	-	-	-	-	-	-
24	1	1	2	1	2	3	-	-	-	3	-	3
25	5	2	7	3	4	7	-	-	-	6	-	6
26	6	2	8	3	3	6	-	-	-	3	-	3
27	8	5	13	9	4	13	4	-	4	6	6	12
28	14	17	31	18	8	26	4	-	4	14	17	31
29	42	21	63	40	21	61	-	-	-	31	11	42
30	88	51	139	88	46	134	8	-	8	47	36	83
31	57	98	155	72	86	158	44	8	52	50	56	106
32	15	79	94	34	96	130	36	12	48	33	33	66
33	19	29	48	30	44	74	44	4	48	42	11	53
34	37	6	43	45	7	52	80	-	80	78	3	81
35	61	3	64	61	5	66	129	4	133	142	3	145
36	25	12	37	41	14	55	68	12	80	100	8	108
37	8	61	69	19	32	51	28	56	84	72	31	103
38	2	83	85	1	47	48	8	108	116	17	42	59
39	1	73	74	1	53	54	8	161	169	3	25	28
40	-	39	39	-	39	39	-	100	100	-	33	33
41	-	17	17	-	14	14	-	48	48	-	31	31
42	-	7	7	-	4	4	-	16	16	-	3	3
43	-	-	-	-	-	-	-	-	-	-	3	3
Total °/oo	391	606	997	467	531	998	465	533	998	653	352	1005
Serial Numbers												
Number of Samples		1			10			1			1	
Number Fish Measured	338	525	863	2220	2629	4849	116	133	249	234	126	360
Mean Length (cm.)												
Mean Weight (kg.)		0.55			0.53			0.75			0.57	
Total Wt. Landed (Tons)		247			1785			170			152	
Estimated No. (millions)												
Mesh Size (inches)		$2\frac{3}{4}$ man.			$2\frac{3}{4}$ man.			$2\frac{3}{4}$ man.			$2\frac{3}{4}$ man.	
Range of Depths (fm.)		150-155			135-165			140			155	

1) No examination was made for marinus-type fish.

(cont'd.)

TABLE 5 CANADA (Nfld.) - 1955/57 LENGTH FREQUENCIES - REDFISH[1] by A.M. Fleming
(cont'd.)

OTTER TRAWLERS - Commercial Landings 1957

Subdivision	3N						3P		
Month	July-September			October-December			October-December		
Sex	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total
cm.	FREQUENCIES in °/oo								
14	-	-	-	-	-	-	-	1	1
15	-	-	-	-	-	-	-	-	-
16	-	-	-	-	-	-	-	1	1
17	-	-	-	-	-	-	1	1	2
18	-	-	-	-	-	-	-	1	1
19	-	-	-	1	2	3	1	-	1
20	1	-	1	8	3	11	1	-	1
21	3	-	3	10	12	22	3	1	4
22	4	1	5	19	9	28	2	2	4
23	14	2	16	40	13	53	3	2	5
24	36	10	46	44	27	71	8	4	12
25	51	16	67	60	23	83	8	7	15
26	57	35	92	58	30	88	14	8	22
27	68	43	111	47	40	87	24	10	34
28	66	49	115	35	33	68	29	11	40
29	46	51	97	50	31	81	43	10	53
30	48	44	92	43	24	67	75	9	84
31	38	32	70	22	30	52	84	13	97
32	32	22	54	20	28	48	87	13	100
33	22	16	38	6	31	37	44	22	66
34	14	18	32	6	40	46	31	46	77
35	7	20	27	1	35	36	40	64	104
36	5	23	28	-	41	41	47	57	104
37	1	28	29	-	24	24	29	46	75
38	2	24	26	-	15	15	17	27	44
39	2	18	20	-	17	17	6	17	23
40	-	13	13	-	9	9	1	19	20
41	-	9	9	-	6	6	-	6	6
42	-	4	4	-	3	3	1	4	5
43	-	1	1	-	1	1	-	1	1
44	-	1	1	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
49	-	-	-	-	-	-	-	1	1
50	-	-	-	-	1	1	-	-	-
Total °/oo	517	480	997	470	528	998	599	404	1003
Serial Numbers									
Number of Samples		9			4			11	
Number Fish Measured	1630	1551	3181	561	597	1158	2890	2342	5232
Mean Length (cm.)									
Mean Weight (kg.)		0.47			0.47			0.54	
Total Wt. Landed (Tons)		868			448			466	
Estimated No. (millions)									
Mesh Size (inches)		$2\frac{3}{4}$ &4 man.			$2\frac{3}{4}$ &4 man.			$2\frac{3}{4}$ man.	
Range of Depths (fm.)		140-200			46-160			90-150	

1) No examination made for marinus-type fish.

(cont'd.)

TABLE 5 CANADA (Nfld.) - 1955/57 LENGTH FREQUENCIES - REDFISH[1] by A.M. Fleming
(cont'd.)

OTTER TRAWLERS - Commercial Landings 1957

Subdivision	4R								
Month	April-June			July-September			October-December		
Sex	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total
cm.	FREQUENCIES in °/oo								
15	-	-	-	1	-	1	-	-	-
16	-	-	-	-	-	-	-	2	2
17	-	-	-	2	-	2	2	-	2
18	-	-	-	2	-	2	2	4	6
19	-	-	-	2	1	3	1	5	6
20	-	-	-	1	1	2	9	3	12
21	-	-	-	1	-	1	7	2	9
22	-	-	-	1	-	1	9	2	11
23	1	1	2	1	2	3	7	3	10
24	-	-	-	2	1	3	22	5	27
25	-	-	-	1	1	2	42	4	46
26	2	-	2	5	1	6	57	16	73
27	5	1	6	8	4	12	58	25	83
28	10	2	12	7	2	9	49	16	65
29	13	5	18	13	7	20	31	13	44
30	32	5	37	38	15	53	16	12	28
31	57	26	83	71	25	96	25	12	37
32	43	40	83	52	59	111	45	19	64
33	40	58	98	51	70	121	54	11	65
34	35	36	71	68	53	121	39	13	52
35	63	18	81	68	23	91	28	19	47
36	81	15	96	46	18	64	15	19	34
37	62	27	89	28	42	70	5	57	62
38	26	49	75	11	63	74	3	73	76
39	12	75	87	1	58	59	1	74	75
40	2	64	66	1	47	48	-	48	48
41	-	45	45	-	24	24	-	15	15
42	-	27	27	-	4	4	-	2	2
43	-	11	11	-	1	1	-	-	-
44	-	6	6	-	-	-	-	-	-
45	-	2	2	-	-	-	-	-	-
46	-	-	-	-	-	-	-	-	-
47	-	-	-	-	-	-	-	-	-
48	-	1	1	-	-	-	-	-	-
Total °/oo	484	514	998	482	522	1004	527	474	1001
Serial Numbers									
Number of Samples		1			4			2	
Number Fish Measured	399	424	823	786	978	1764	328	320	648
Mean Length (cm.)									
Mean Weight (kg.)		0.69			0.62			0.53	
Total Wt. Landed (Tons)		188			1123			267	
Estimated No. (millions)									
Mesh Size (inches)		2¾ man.			2¾ man.			2¾ man.	
Range of Depths (fm.)		140-160			135-157			125-135	

1) No examination was made for marinus-type fish.

(cont'd.)

TABLE 5 CANADA (Nfld.) - 1955/57 LENGTH FREQUENCIES - REDFISH[1] by A.M. Fleming
(cont'd.)

OTTER TRAWLERS - Commercial Landings 1957

Subdivision	4S								
Month	April-June			July-September			October-December		
Sex	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total
cm.	FREQUENCIES in °/oo								
16	-	-	-	1	-	1	-	-	-
17	2	-	2	-	-	-	-	-	-
18	1	-	1	1	1	2	-	-	-
19	-	-	-	1	-	1	-	-	-
20	1	-	1	-	-	-	4	-	4
21	-	-	-	1	1	2	-	-	-
22	2	3	5	1	-	1	-	-	-
23	3	2	5	-	-	-	4	-	4
24	-	1	1	2	1	3	4	4	8
25	6	-	6	1	-	1	16	12	28
26	7	2	9	1	1	2	37	-	37
27	12	8	20	3	1	4	41	4	45
28	16	4	20	6	1	7	25	-	25
29	19	12	31	14	2	16	16	4	20
30	34	17	51	32	8	40	25	8	33
31	62	35	97	44	16	60	33	4	37
32	62	58	120	62	40	102	45	4	49
33	41	65	106	60	45	105	74	4	78
34	25	50	75	72	45	117	95	8	103
35	48	21	69	94	21	115	103	16	119
36	30	13	43	76	21	97	58	33	91
37	12	46	58	33	47	80	25	58	83
38	4	64	68	13	63	76	-	86	86
39	-	83	83	1	71	72	-	62	62
40	-	81	81	-	56	56	-	41	41
41	-	33	33	-	29	29	-	33	33
42	-	13	13	-	10	10	-	8	8
43	-	5	5	-	3	3	-	4	4
Total °/oo	387	616	1003	519	483	1002	605	393	998
Serial Numbers									
Number of Samples		1			9			1	
Number Fish Measured	397	633	1030	1885	1663	3548	147	96	243
Mean Length (cm.)									
Mean Weight (kg.)		0.61			0.68			0.77	
Total Wt. Landed (Tons)		137			1520			250	
Estimated No. (millions)									
Mesh Size (inches)		$2\frac{3}{4}$ man.			$2\frac{3}{4}$ man.			$2\frac{3}{4}$ man.	
Range of Depths (fm.)		150			120-185			100-120	

1) No examination was made for marinus-type fish.

TABLE 6 CANADA (Nfld.) - 1955/57 LENGTH FREQUENCIES - AMERICAN PLAICE by A.M. Fleming

OTTER TRAWLERS - Commercial Landings 1955

Subdivision	3L											
Month	January-March			April-June			July-September			October-December		
Sex	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total
2-cm. group	FREQUENCIES in °/oo											
22-23	-	-	-	-	-	-	2	-	2	-	-	-
24-25	-	-	-	1	-	1	-	-	-	-	-	-
26-27	1	-	1	1	1	2	-	-	-	-	-	-
28-29	1	2	3	2	1	3	-	-	-	10	-	10
30-31	5	-	5	5	1	6	3	-	3	20	6	26
32-33	18	6	24	19	3	22	4	1	5	6	16	22
34-35	53	8	61	36	8	44	10	11	21	29	22	51
36-37	108	9	117	71	20	91	43	12	55	59	32	91
38-39	135	20	155	99	23	122	75	28	103	48	45	93
40-41	151	36	187	114	29	143	91	27	118	88	57	145
42-43	107	56	163	116	43	159	111	43	154	50	43	93
44-45	47	61	108	75	43	118	64	63	127	66	44	110
46-47	16	52	68	31	53	84	37	79	116	41	30	71
48-49	11	37	48	8	50	58	10	85	95	26	48	74
50-51	1	25	26	5	47	52	4	62	66	4	35	39
52-53	4	14	18	-	37	37	-	50	50	-	32	32
54-55	-	5	5	-	24	24	-	34	34	-	47	47
56-57	-	3	3	-	15	15	-	20	20	-	36	36
58-59	1	2	3	-	7	7	-	11	11	-	28	28
60-61	-	2	2	-	6	6	-	10	10	-	15	15
62-63	-	1	1	-	5	5	-	7	7	-	8	8
64-65	-	1	1	-	1	1	-	2	2	-	5	5
66-67	-	-	-	-	2	2	-	-	-	-	3	3
68-69	-	-	-	-	-	-	-	-	-	-	-	-
70-71	-	-	-	-	-	-	-	1	1	-	-	-
72-73	-	-	-	-	-	-	-	1	1	-	-	-
Total °/oo	659	340	999	583	419	1002	454	547	1001	447	552	999
Serial Numbers												
Number of Samples		4			23			4			2	
Number Fish Measured	826	431	1257	2974	2312	5286	406	527	933	169	280	449
Mean Length (cm.)												
Mean Weight (kg.)		0.68			0.80			0.93			0.88	
Total Wt. Landed (Tons)		632			3321			1154			256	
Estimated No (millions)		0.929			4.151			1.241			0.291	
Mesh Size (inches)		2¾ man.			2¾ man.			2¾ man.			2¾ man.	
Range of Depths (fm.)		52-83			35-98			65-104			35-85	

(cont'd.)

TABLE 6 CANADA (Nfld.) - 1955/57 LENGTH FREQUENCIES - AMERICAN PLAICE by A.M. Fleming (cont'd.)

OTTER TRAWLERS - Commercial Landings 1955

Subdivision	3N									3P		
Month	January-March			July-September			October-December			April-June		
Sex	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total
2-cm. group	FREQUENCIES in °/oo											
26-27	-	-	-	14	-	14	-	-	-	-	-	-
28-29	7	10	17	18	-	18	1	-	1	-	-	-
30-31	27	14	41	18	-	18	2	-	2	-	-	-
32-33	21	24	45	25	4	29	9	6	15	-	-	-
34-35	58	45	103	35	7	42	28	8	36	-	-	-
36-37	72	52	124	67	14	81	61	35	96	2	-	2
38-39	76	69	145	78	32	110	78	36	114	-	-	-
40-41	100	41	141	99	32	131	78	37	115	8	1	9
42-43	96	55	151	92	25	117	80	48	128	29	1	30
44-45	48	24	72	117	25	142	82	50	132	82	12	94
46-47	55	24	79	121	11	132	68	43	111	109	15	124
48-49	7	17	24	46	32	78	36	32	68	92	28	120
50-51	-	17	17	7	14	21	6	42	48	110	47	157
52-53	-	14	14	-	14	14	-	43	43	33	94	127
54-55	-	21	21	-	21	21	1	42	43	10	87	97
56-57	-	3	3	-	7	7	-	26	26	6	82	88
58-59	-	-	-	-	7	7	-	13	13	-	69	69
60-61	-	3	3	-	11	11	-	6	6	4	40	44
62-63	-	-	-	-	4	4	-	2	2	-	18	18
64-65	-	-	-	-	4	4	-	3	3	-	18	18
66-67	-	-	-	-	-	-	-	-	-	-	2	2
Total °/oo	567	433	1000	737	264	1001	530	472	1002	485	514	999
Serial Numbers												
Number of Samples		1			1			7			2	
Number Fish Measured	165	126	291	208	74	282	930	770	1700	332	293	625
Mean Length (cm.)												
Mean Weight (kg.)		0.62			0.80			0.91			1.27	
Total Wt. Landed (Tons)		98			28			894			172	
Estimated No. (millions)		0.158			0.035			0.982			0.135	
Mesh Size (inches)		$2\frac{3}{4}$ man.			$2\frac{3}{4}$ man.			$2\frac{3}{4}$ man.			$2\frac{3}{4}$ man.	
Range of Depths (fm.)		45			40			33-90			80-100	

(cont'd.)

TABLE 6 CANADA (Nfld.) - 1955/57 LENGTH FREQUENCIES - AMERICAN PLAICE by A.M. Fleming
(cont'd.)

OTTER TRAWLERS - Commercial Landings 1956

Subdivision	3L								
Month	April-June			July-September			October-December		
Sex	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total
2-cm. groups	FREQUENCIES in °/oo								
20-21	-	-	-	-	-	-	1	-	1
22-23	1	-	1	-	-	-	1	-	1
24-25	-	-	-	2	-	2	-	-	-
26-27	1	-	1	3	-	3	1	-	1
28-29	1	-	1	4	-	4	3	-	3
30-31	8	2	10	10	3	13	6	-	6
32-33	23	9	32	20	7	27	9	-	9
34-35	51	19	70	49	16	65	25	5	30
36-37	69	27	96	61	30	91	75	14	89
38-39	80	27	107	84	29	113	110	22	132
40-41	90	47	137	82	43	125	111	44	155
42-43	94	44	138	77	59	136	87	66	153
44-45	74	34	108	60	62	122	71	83	154
46-47	39	46	85	19	67	86	22	68	90
48-49	11	43	54	7	66	73	10	58	68
50-51	5	44	49	-	53	53	3	43	46
52-53	2	38	40	-	36	36	-	22	22
54-55	-	27	27	-	21	21	-	14	14
56-57	2	18	20	-	16	16	-	9	9
58-59	1	11	12	-	7	7	-	5	5
60-61	-	5	5	-	4	4	-	3	3
62-63	-	3	3	-	4	4	-	3	3
64-65	-	1	1	-	-	-	-	4	4
66-67	-	-	-	-	1	1	-	-	-
68-69	-	1	1	-	-	-	-	-	-
Total °/oo	552	446	998	478	524	1002	535	463	998
Serial Numbers									
Number of Samples		10			10			4	
Number Fish Measured	1897	1526	3423	1733	1793	3526	589	517	1106
Mean Length (cm.)									
Mean Weight (kg.)		0.78			0.77			0.75	
Total Wt. Landed (Tons)		2599			2435			259	
Estimated No. (millions)		3.332			3.162			0.345	
Mesh Size (inches)		2¾ man.			2¾ man.			2¾ man.	
Range of Depths (fm.)		40-88			52-145			30-52	

(cont'd.)

TABLE 6 CANADA (Nfld.) - 1955/57 LENGTH FREQUENCIES - AMERICAN PLAICE by A.M. Fleming (cont'd.)

OTTER TRAWLERS - Commercial Landings 1956

Subdivision	3N					
Month	July-September			October-December		
Sex	♂♂	♀♀	Total	♂♂	♀♀	Total
2-cm. group	FREQUENCIES in °/oo					
26-27	-	1	1	-	-	-
28-29	3	-	3	1	2	3
30-31	5	2	7	2	2	4
32-33	21	8	29	10	10	20
34-35	53	32	85	31	19	50
36-37	81	44	125	63	34	97
38-39	102	44	146	69	31	100
40-41	103	33	136	96	44	140
42-43	96	39	135	87	40	127
44-45	74	38	112	95	36	131
46-47	57	25	82	89	40	129
48-49	32	19	51	36	25	61
50-51	7	20	27	11	26	37
52-53	1	18	19	2	28	30
54-55	-	16	16	-	24	24
56-57	-	15	15	-	24	24
58-59	-	8	8	-	12	12
60-61	-	3	3	-	8	8
62-63	-	-	-	-	3	3
64-65	-	1	1	-	2	2
Total °/oo	635	366	1001	592	410	1002
Serial Numbers						
Number of Samples		6			10	
Number Fish Measured	1271	771	2042	1831	1329	3160
Mean Length (cm.)						
Mean Weight (kg.)		0.75			0.88	
Total Wt. Landed (Tons)		784			1565	
Estimated No. (millions)		1.045			1.778	
Mesh Size (inches)		2¾ man.			2¾ man.	
Range of Depths (fm.)		30-70			34-120	

(cont'd.)

TABLE 6 CANADA (Nfld.) - 1955/57 LENGTH FREQUENCIES - AMERICAN PLAICE by A.M. Fleming (cont'd.)

OTTER TRAWLERS - Commercial Landings 1957

Subdivision	3L									3N		
Month	April-June			July-September			October-December			July-September		
Sex	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total
2-cm. group	FREQUENCIES in °/oo											
26-27	-	1	1	-	-	-	-	-	-	-	-	-
28-29	1	1	2	1	-	1	-	-	-	-	-	-
30-31	3	1	4	1	2	3	3	-	3	-	-	-
32-33	1	4	5	5	4	9	-	9	9	12	7	19
34-35	12	12	24	19	9	28	6	25	31	34	18	52
36-37	37	19	56	29	22	51	13	9	22	44	30	74
38-39	59	33	92	40	24	64	37	9	46	98	46	144
40-41	77	50	127	53	37	90	59	17	76	94	54	148
42-43	86	56	142	65	50	115	94	41	135	107	55	162
44-45	55	62	117	76	56	132	144	38	182	42	57	99
46-47	40	69	109	45	64	109	109	47	156	33	56	89
48-49	9	70	79	23	85	108	38	91	129	20	37	57
50-51	2	66	68	4	86	90	3	78	81	5	29	34
52-53	2	63	65	-	82	82	-	53	53	-	22	22
54-55	-	37	37	-	63	63	-	44	44	-	35	35
56-57	-	29	29	-	29	29	-	22	22	-	25	25
58-59	-	19	19	-	11	11	-	9	9	-	28	28
60-61	-	8	8	-	6	6	-	-	-	-	7	7
62-63	-	9	9	-	5	5	-	3	3	-	2	2
64-65	-	4	4	-	2	2	-	-	-	-	2	2
66-67	-	2	2	-	-	-	-	-	-	-	-	-
68-69	-	2	2	-	-	-	-	-	-	-	-	-
Total °/oo	384	617	1001	361	637	998	506	495	1001	489	510	999
Serial Numbers												
Number of Samples		8			8			1			3	
Number Fish Measured	772	1259	2031	744	1386	2130	162	158	320	382	388	770
Mean Length (cm.)												
Mean Weight (kg.)		0.92			1.03			1.03			0.99	
Total Wt. Landed (Tons)		1590			2038			180			477	
Estimated No.(millions)		1.728			1.979			0.175			0.482	
Mesh Size (inches)		4 man.			4 man.			4 man.			4 man.	
Range of Depths (fm.)		40-82			52-95			80-87			33-100	

(cont'd.)

TABLE 6 CANADA (Nfld.) - 1955/57 LENGTH FREQUENCIES - AMERICAN PLAICE by A.M. Fleming (cont'd.)

OTTER TRAWLERS - Commercial Landings 1957

Subdivision	3N			3O			?		
Month	October-December			April-June			January-March		
Sex	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total
2-cm. group	FREQUENCIES in °/oo								
22-23	1	-	1	-	-	-	-	-	-
24-25	1	-	1	-	-	-	2	-	2
26-27	1	1	2	-	-	-	-	1	1
28-29	2	2	4	-	-	-	3	2	5
30-31	13	7	20	4	-	4	5	2	7
32-33	27	18	45	16	12	28	9	7	16
34-35	43	28	71	12	-	12	31	17	48
36-37	63	37	100	8	8	16	51	36	87
38-39	83	45	128	20	24	44	70	49	119
40-41	93	44	137	61	28	89	77	66	143
42-43	73	43	116	81	37	118	67	76	143
44-45	68	40	108	65	53	118	40	73	113
46-47	57	44	101	24	98	122	21	75	96
48-49	30	28	58	16	89	105	11	67	78
50-51	6	28	34	4	93	97	2	54	56
52-53	1	18	19	4	93	97	-	30	30
54-55	-	17	17	-	45	45	-	21	21
56-57	-	15	15	-	37	37	-	11	11
58-59	-	12	12	-	8	8	-	6	6
60-61	-	5	5	-	20	20	-	12	12
62-63	-	3	3	-	16	16	-	-	-
64-65	-	1	1	-	8	8	-	6	6
66-67	-	-	-	-	8	8	-	-	-
68-69	-	-	-	-	4	4	-	2	2
70-71	-	-	-	-	-	-	-	-	-
72-73	-	-	-	-	-	-	-	1	1
Total °/oo	562	436	998	315	681	996	389	614	1003
Serial Numbers									
Number of Samples		21			1			4	
Number Fish Measured	3436	2758	6194	78	168	246	440	697	1137
Mean Length (cm.)									
Mean Weight (kg.)		0.80			0.98			0.87	
Total Wt. Landed(Tons)		2044			44			821	
Est. Number (millions)		2.555			0.045			0.944	
Mesh Size (inches)		4 man.			4 man.			4 man.	
Range of Depths (fm.)		30-100			40-45			80-90	

TABLE 7 CANADA (Nfld.) - 1955/57 LENGTH FREQUENCIES - WITCH by A.M. Fleming

Commercial Landings 1955

	Otter Trawlers									Danish Seiners		
Subdivision	3N			3O			4V			3P		
Month	October-December			January-March			April-June			January-March		
Sex	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total
cm.	FREQUENCIES in °/oo											
30	-	-	-	-	-	-	-	-	-	1	-	1
31	-	-	-	-	-	-	-	-	-	-	-	-
32	-	-	-	-	-	-	-	-	-	-	-	-
33	-	-	-	-	-	-	-	-	-	2	-	2
34	-	-	-	-	-	-	8	-	8	-	-	-
35	-	-	-	-	-	-	-	4	4	-	-	-
36	-	-	-	3	4	7	-	4	4	-	-	-
37	-	-	-	3	3	6	8	4	12	9	-	9
38	9	-	9	2	4	6	13	8	21	11	-	11
39	23	-	23	9	4	13	21	29	50	10	-	10
40	23	14	37	10	10	20	25	4	29	22	1	23
41	41	9	50	20	7	27	21	-	21	36	2	38
42	46	5	51	27	8	35	25	8	33	44	4	48
43	69	28	97	38	20	58	55	25	80	59	4	63
44	51	14	65	50	28	78	42	21	63	76	8	84
45	83	18	101	48	39	87	38	29	67	72	17	89
46	41	37	78	52	65	117	17	50	67	80	28	108
47	41	37	78	61	55	116	46	50	96	52	40	92
48	23	37	60	47	51	98	21	50	71	47	56	103
49	32	69	101	36	58	94	-	55	55	27	67	94
50	14	74	88	15	50	65	4	59	63	17	55	72
51	5	37	42	20	37	57	-	80	80	7	52	59
52	5	37	42	-	38	38	8	25	33	5	29	34
53	5	28	33	1	36	37	8	29	37	4	26	30
54	-	28	28	1	22	23	-	34	34	2	14	16
55	-	14	14	-	6	6	-	21	21	-	6	6
56	-	5	5	-	9	9	-	17	17	1	3	4
57	-	-	-	-	2	2	-	8	8	-	2	2
58	-	-	-	-	2	2	-	8	8	-	2	2
59	-	-	-	-	-	-	-	8	8	-	-	-
60	-	-	-	-	-	-	-	-	-	-	-	-
61	-	-	-	-	-	-	-	-	-	-	-	-
62	-	-	-	-	-	-	-	4	4	-	-	-
Total °/oo	511	491	1002	443	558	1001	360	634	994	584	416	1000
Serial Numbers												
Number of Samples		1			2			1			6	
Number Fish Measured	111	106	217	293	376	669	86	152	238	988	749	1737
Mean Length (cm.)												
Mean Weight (kg.)		0.66			0.76			0.76			0.79	
Total Wt. Landed (Tons)		39			100			372			185	
Estimated No. (millions)		0.059			0.132			0.489			0.234	
Mesh Size (inches)		2¾ man.			2¾ man.			2¾ man.			2¾ man.	
Range of Depths (fm.)		42-80			55-90			150			95-180	

(cont'd.)

TABLE 7 CANADA (Nfld.) - 1955/57 LENGTH FREQUENCIES - WITCH by A.M. Fleming
(cont'd.)

DANISH SEINERS - Commercial Landings 1955

Subdivision	3P									4V		
Month	April-June			July-September			October-December			July-September		
Sex	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total
cm.	FREQUENCIES in °/oo											
27	-	-	-	1	-	1	-	-	-	-	-	-
28	-	-	-	-	1	1	-	-	-	-	-	-
29	-	-	-	-	-	-	-	-	-	-	-	-
30	-	-	-	-	-	-	1	-	1	-	-	-
31	5	-	5	1	-	1	1	-	1	-	-	-
32	-	-	-	1	1	2	3	-	3	-	-	-
33	-	-	-	1	2	3	3	-	3	3	-	3
34	5	-	5	1	4	5	7	-	7	8	-	8
35	5	-	5	1	3	4	5	2	7	16	-	16
36	5	-	5	8	8	16	10	1	11	11	3	14
37	9	-	9	2	8	10	6	2	8	19	8	27
38	28	-	28	9	5	14	12	11	23	19	19	38
39	5	-	5	10	5	15	12	1	13	24	35	59
40	47	9	56	11	18	29	18	7	25	3	35	38
41	33	-	33	15	19	34	24	8	32	22	51	73
42	62	14	76	7	29	36	39	16	55	11	43	54
43	109	-	109	14	24	38	42	12	54	5	78	83
44	95	24	119	10	21	31	61	21	82	-	38	38
45	57	24	81	6	28	34	45	33	78	-	54	54
46	76	24	100	9	46	55	37	47	84	5	57	62
47	38	24	62	6	68	74	41	73	114	-	49	49
48	9	57	66	5	93	98	22	75	97	3	57	60
49	9	57	66	2	132	134	10	81	91	-	59	59
50	9	57	66	3	85	88	3	54	57	-	30	30
51	5	24	29	-	87	87	4	54	58	-	57	57
52	-	52	52	-	73	73	-	35	35	-	41	41
53	-	14	14	-	55	55	-	34	34	-	32	32
54	-	5	5	-	32	32	-	20	20	-	54	54
55	-	-	-	1	21	22	-	4	4	-	19	19
56	-	5	5	-	10	10	-	1	1	-	19	19
57	-	-	-	-	-	-	-	2	2	-	11	11
58	-	-	-	-	-	-	1	-	1	3	-	3
Total °/oo	611	390	1001	124	878	1002	407	594	1001	152	849	1001
Serial Numbers												
Number of Samples		1			2			3			1	
Number Fish Measured	129	82	211	89	563	652	292	459	751	56	314	370
Mean Length (cm.)												
Mean Weight (kg.)		0.43			0.84			0.72			0.71	
Total Wt. Landed (Tons)		346			122			151			35	
Estimated No. (millions)		0.805			0.145			0.210			0.049	
Mesh Size (inches)		2¾ man.			2¾ man.			2¾ man.			2¾ man.	
Range of Depths (fm.)		110-115			100-160			100-165			65-75	

(cont'd.)

TABLE 7 CANADA (Nfld.) - 1955/57 LENGTH FREQUENCIES - WITCH by A.M. Fleming
(cont'd.)

Commercial Landings 1956

	Otter Trawlers						Danish Seiners		
Subdivision	3O			4V			3P		
Month	October-December			April-June			January-March		
Sex	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total
cm.	FREQUENCIES in °/oo								
31	-	-	-	5	-	5	-	1	1
32	-	-	-	-	-	-	1	1	2
33	-	-	-	-	-	-	-	-	-
34	6	-	6	-	-	-	1	-	1
35	-	-	-	-	-	-	3	1	4
36	-	3	3	-	-	-	5	2	7
37	6	-	6	10	-	10	8	3	11
38	-	-	-	15	5	20	19	4	23
39	6	3	9	5	15	20	16	8	24
40	21	6	27	29	-	29	26	8	34
41	27	9	36	15	15	30	33	8	41
42	39	15	54	20	24	44	44	16	60
43	45	24	69	24	10	34	40	25	65
44	48	21	69	15	15	30	43	21	64
45	54	39	93	34	24	58	44	32	76
46	54	57	111	29	34	63	44	44	88
47	45	57	102	34	29	63	33	45	78
48	30	60	90	34	59	93	29	61	90
49	21	81	102	24	78	102	18	62	80
50	6	60	66	-	73	73	13	66	79
51	3	45	48	20	54	74	5	56	61
52	3	51	54	5	73	78	2	40	42
53	-	36	36	-	49	49	1	33	34
54	-	9	9	-	59	59	-	14	14
55	-	3	3	-	5	5	-	12	12
56	-	6	6	-	29	29	1	5	6
57	-	3	3	-	10	10	-	1	1
58	-	-	-	-	20	20	-	-	-
59	-	-	-	-	-	-	-	-	-
60	-	-	-	-	5	5	-	-	-
Total °/oo	414	588	1002	318	685	1003	429	569	998
Serial Numbers									
Number of Samples		1			1			11	
Number Fish Measured	138	196	334	65	140	205	987	1381	2368
Mean Length (cm.)									
Mean Weight (kg.)		0.69			0.82			0.80	
Total Wt. Landed (Tons)		580			196			143	
Estimated No. (millions)		0.841			0.239			0.179	
Mesh Size (inches)		2¾ man.			2¾ man.			4 man.	
Range of Depths (fm.)		46-55			45-150			95-185	

(cont'd.)

TABLE 7 CANADA (Nfld.) - 1955/57 LENGTH FREQUENCIES - WITCH by A.M. Fleming
(cont'd.)

DANISH SEINERS - Commercial Landings 1956

Subdivision	3P			4R					
Month	April-June			April-June			July-September		
Sex	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total
cm.	FREQUENCIES in °/oo								
29	-	-	-	1	-	1	-	-	-
30	-	-	-	-	-	-	-	-	-
31	-	9	9	-	4	4	-	-	-
32	14	9	23	-	-	-	-	-	-
33	41	51	92	3	-	3	-	-	-
34	18	28	46	4	1	5	4	2	6
35	78	46	124	-	-	-	8	4	12
36	41	46	87	13	4	17	10	2	12
37	60	46	106	26	13	39	20	8	28
38	60	28	88	20	7	27	12	6	18
39	74	41	115	23	3	26	26	2	28
40	41	14	55	38	25	63	40	4	44
41	41	28	69	38	14	52	46	6	52
42	18	18	36	13	39	52	51	24	75
43	14	18	32	34	4	38	61	24	85
44	18	9	27	23	51	74	38	27	65
45	9	-	9	52	52	104	40	37	77
46	9	23	32	48	40	88	31	61	92
47	9	5	14	31	43	74	32	65	97
48	-	9	9	19	49	68	18	53	71
49	5	-	5	14	48	62	10	48	58
50	-	9	9	8	30	38	6	63	69
51	-	5	5	6	49	55	4	30	34
52	-	5	5	1	54	55	-	30	30
53	-	-	-	-	14	14	-	12	12
54	-	-	-	-	12	12	-	10	10
55	-	-	-	-	13	13	-	6	6
56	-	-	-	-	1	1	-	8	8
57	-	-	-	-	1	1	-	4	4
58	-	-	-	-	12	12	-	2	2
59	-	-	-	-	-	-	-	2	2
Total °/oo	550	447	997	415	583	998	457	540	997
Serial Numbers									
Number of Samples		1			2			2	
Number Fish Measured	120	97	217	173	185	358	227	267	494
Mean Length (cm.)									
Mean Weight (kg.)		0.41			0.71			0.59	
Total Wt. Landed (Tons)		128			228			170	
Estimated No. (millions)		0.312			0.321			0.288	
Mesh Size (inches)		4 man.			4 man.			4 man.	
Range of Depths (fm.)		98-100			62-75			56-65	

(cont'd.)

TABLE 7 CANADA (Nfld.) - 1955/57 LENGTH FREQUENCIES - WITCH by A.M. Fleming
(cont'd.)

Commercial Landings 1957

	Otter Trawlers						Danish Seiners					
Subdivision	3O						4R					
Month	January-March			April-June			April-June			July-September		
Sex	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total
cm.	FREQUENCIES in °/oo											
29	–	–	–	–	–	–	–	–	–	1	–	1
–	–	–	–	–	–	–	–	–	–	–	–	–
33	–	–	–	–	2	2	–	–	–	–	–	–
34	–	–	–	–	–	–	3	–	3	–	–	–
35	–	–	–	–	–	–	7	1	8	1	–	1
36	4	4	8	7	–	7	8	1	9	3	–	3
37	4	4	8	5	–	5	14	3	17	5	1	6
38	4	–	4	10	7	17	28	10	38	10	1	11
39	11	–	11	15	2	17	29	8	37	14	2	16
40	18	4	22	27	10	37	32	8	40	21	7	28
41	–	7	7	47	20	67	32	15	47	26	7	33
42	29	7	36	20	7	27	49	24	73	52	6	58
43	40	14	54	35	12	47	32	28	60	49	11	60
44	36	18	54	72	15	87	32	24	56	50	13	63
45	79	18	97	87	22	109	41	29	70	65	18	83
46	94	40	134	74	27	101	11	46	57	64	29	93
47	69	22	91	60	37	97	10	59	69	50	46	96
48	58	43	101	40	45	85	14	55	69	38	68	106
49	51	47	98	42	52	94	3	76	79	29	68	97
50	18	72	90	20	30	50	–	55	55	7	66	73
51	14	51	65	22	47	69	1	53	54	4	54	58
52	–	43	43	2	40	42	–	45	45	2	34	36
53	–	47	47	2	15	17	–	38	38	1	25	26
54	–	22	22	–	10	10	–	27	27	–	18	18
55	–	7	7	–	5	5	–	20	20	–	12	12
56	–	–	–	–	5	5	–	10	10	–	9	9
57	–	4	4	–	–	–	–	7	7	–	7	7
58	–	–	–	–	–	–	–	6	6	–	3	3
59	–	–	–	–	–	–	–	1	1	–	2	2
60	–	–	–	–	–	–	–	4	4	–	1	1
61	–	–	–	–	–	–	–	–	–	–	–	–
62	–	–	–	–	–	–	–	–	–	–	1	1
63	–	–	–	–	–	–	–	–	–	–	–	–
64	–	–	–	–	–	–	–	1	1	–	–	–
Total °/oo	529	474	1003	587	410	997	346	654	1000	492	509	1001
Serial Numbers												
Number of Samples		1			1			1			3	
Number Fish Measured	146	131	277	237	166	403	248	467	715	710	732	1442
Mean Length (cm.)												
Mean Weight (kg.)		0.75			0.64			0.73			0.77	
Total Wt. Landed (Tons)		565			973			205			156	
Estimated No. (millions)		0.753			1.520			0.281			0.203	
Mesh Size (inches)		2¾ man.			2½ man.			4 man.			4 man.	
Range of Depths (fm.)		43–80			48–54			60–62			50–62	

COD - 1958

Guide to Tables

The numbers in the guide are page numbers. For a length frequency reference the page number alone is given. For an age frequency the page number is followed by A. For an age frequency with mean size at each age, the page number is followed by A'. For an age/length key or frequency the page number is followed by K. For a weight/length table the page number is followed by W. For discard experiments the page number is followed by D.

PAGE NUMBERS

Sub-division	OTTER TRAWL				HOOK & LINE AND OTHER GEARS			
	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
East Greenland	59,80A', 99K,100K		59,80A', 101K				72A',73A' 74A'	
1A							78A	78A
1B		66	60,67,81A' 102K,103K				75A',78A	78A
1C		63,66,67 84A'	61,82A 109K				62,76A' 78A,83A	
1D	58,80A' 91K	58,63,67 80A',85A' 92K,93K	60,67,81A' 104K,105K		78A	62,65,76A' 78A,79A,83A 90A'	76A',77A' 79A	
1E		67					77A'	
1F	58,80A' 94K	58,80A' 95K	60,81A' 106K,107K 108K	58,80A' 96K			79A	
Subarea 1		69 (year) 115K(year)						
2H			61,82A 110K					
2J			61,63,82A 85A',111K 113K	58,63,80A' 86A',97K				
2J-3K			61,82A 112K					
3K			61,63,82A 114K	63				
3L		67	64,67	67		55,56,57	55,56,57	57
3M	68	68	68					
3N	55	55,68						
3O	58	55,68				65		
3P south	55,58,80A' 98K					56	55,56,57	56
3P north							56	
3P						65		
3K-L-O-P		116W						

(cont'd.)

(cont'd.)

PAGE NUMBERS

Subdivision	OTTER TRAWL				HOOK & LINE AND OTHER GEAR			
	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
4R	64,87A'	64,87A'						
4T		49,52D,64,88A'	49,52D,53D 54	49		51	54	
4V	64,88A'	49,64,89A'		49		51	51	
4V-W		50	50,53D	50				
4W	50	50	50,53D	50				
4X						51		51
5Y	70	70	70	70				
5Z	71	71	71	71				

TABLE 8 CANADA (Maritimes) - 1958 LENGTH FREQUENCIES - COD by W.R. Martin
D.N. Fitzgerald

OTTER TRAWLERS - Commercial Samples

Subdivision	4T						4V			
Month	May	June	July	Aug.	Sept.	Oct.	April	May	Nov.	Dec.
3-cm. group	FREQUENCIES						in °/oo			
39-41	1	-	2	-	-	2	-	-	4	-
42-44	18	1	18	7	15	11	11	12	69	32
45-47	67	11	30	95	117	54	46	70	174	150
48-50	128	97	90	140	133	90	118	155	232	234
51-53	176	172	141	157	108	129	180	169	193	180
54-56	129	102	169	133	103	140	215	131	132	158
57-59	98	108	115	117	74	124	113	144	77	71
60-62	82	108	98	73	97	107	113	80	67	58
63-65	59	150	87	67	61	99	76	27	26	54
66-68	54	77	73	49	39	72	33	13	6	29
69-71	46	38	48	38	36	46	27	60	10	17
72-74	43	42	34	30	35	33	13	13	10	8
75-77	29	31	24	22	53	21	12	37	-	8
78-80	23	17	20	24	22	15	7	13	-	-
81-83	10	7	13	11	28	18	7	37	-	-
84-86	9	10	12	10	16	14	5	11	-	-
87-89	10	15	10	9	20	12	5	6	-	-
90-92	5	7	5	6	16	6	5	5	-	-
93-95	5	1	4	4	10	4	3	2	-	-
96-98	2	2	4	2	4	2	2	6	-	-
99-101	2	-	2	2	4	1	2	4	-	-
102-104	1	1	1	1	1	-	2	1	-	-
105-107	1	1	1	1	1	-	2	2	-	-
108-110	1	1	-	1	-	-	1	-	-	-
111-113	-	1	-	1	4	-	1	1	-	-
114-116	1	-	-	-	-	-	1	1	-	-
117-119	-	-	-	-	-	-	-	-	-	-
120-122	-	-	-	-	1	-	-	-	-	-
123-125	-	-	-	-	1	-	-	-	-	-
Total °/oo	1000	1000	1001	1000	999	1000	1000	1000	1000	999
Serial Numbers										
Number of Samples	3	1	4	4	1	3	4	1	1	1
Number Fish Measured	1015	315	1575	1660	435	1595	1200	293	300	300
Mean Length (cm.)										
Mean Weight (Kg.)	1.83	2.17	2.13	1.96	2.31	2.03	1.87	1.96	1.39	1.50
Total Wt. Landed (Tons)	1202	2500	4638	5404	3417	2633	1867	851	1286	559
Estimated No.(millions)										
Mesh Size (inches)	3-4⅛	4½	4½-4¾	4½	4½	4½	4-5	4½	4½	4⅜
Range of Depths (fm.)	25-150	35	20-82	30-75	30-60	15-60	20-28	50-80	30	?

(cont'd.)

TABLE 8 CANADA (Maritimes) - 1958 LENGTH FREQUENCIES - COD - by W.R. Martin
(cont'd.) D.N. Fitzgerald

OTTER TRAWLERS - Commercial Samples

Subdivision	4W-W				4W					
Month	June	July	Sept.	Nov.	March	April	Aug.	Sept.	Oct.	Nov.
3-cm. group	FREQUENCIES in °/oo									
36-38	-	-	-	6	-	-	-	-	-	-
39-41	-	-	-	11	-	-	-	-	10	4
42-44	14	-	6	80	-	7	17	13	72	20
45-47	68	139	34	198	2	22	65	87	77	53
48-50	169	337	129	184	7	71	146	203	121	134
51-53	262	225	181	199	37	111	139	249	213	180
54-56	235	105	302	152	50	213	146	196	167	168
57-59	123	69	110	67	48	136	175	133	134	139
60-62	79	55	115	57	67	183	118	58	82	102
63-65	20	36	60	21	58	109	93	19	40	73
66-68	13	11	30	18	39	62	39	24	36	55
69-71	10	7	10	4	50	31	11	10	24	37
72-74	3	7	20	-	50	12	21	5	18	14
75-77	3	4	-	-	30	4	7	-	3	12
78-80	-	4	1	-	52	4	11	-	-	5
81-83	-	-	1	-	37	4	5	5	-	-
84-86	-	-	-	-	52	3	2	-	3	2
87-89	3	-	1	-	71	6	2	-	-	-
90-92	-	-	-	-	70	4	3	-	-	-
93-95	-	-	-	-	60	4	1	-	-	-
96-98	-	-	-	-	56	3	1	-	-	-
99-101	-	-	-	-	30	2	1	-	-	-
102-104	-	-	-	-	33	1	-	-	-	-
105-107	-	-	-	-	25	3	-	-	-	-
108-110	-	-	-	-	16	1	-	-	-	-
111-113	-	-	-	-	13	1	-	-	-	-
114-116	-	-	-	-	14	-	-	-	-	-
117-119	-	-	-	-	9	1	-	-	-	-
120-122	-	-	-	-	6	-	-	-	-	-
123-125	-	-	-	-	5	-	-	-	-	-
126-128	-	-	-	-	5	-	-	-	-	-
129-131	-	-	-	-	5	-	-	-	-	-
132-134	-	-	-	-	2	-	-	-	-	-
135-137	-	-	-	-	1	-	-	-	-	-
Total °/oo	1002	999	1000	997	1000	998	1001	1002	1000	998
Serial Numbers										
Number of Samples	1	1	1	1	2	1	1	1	1	2
Number Fish Measured	350	330	260	305	650	300	300	300	300	600
Mean Length (cm.)										
Mean Weight (Kg.)	1.41	1.59	1.74	1.23	5.90	2.03	1.96	1.54	1.60	1.78
Total Wt. Landed (Tons)					741	1225	182	253	494	400
Estimated No.(millions)										
Mesh Size (inches)	$4\frac{1}{2}$	$4\frac{3}{4}$	$4\frac{9}{16}$	5	$4\frac{1}{2}$-$5\frac{1}{2}$	$4\frac{1}{2}$	$3\frac{1}{2}$	$4\frac{5}{8}$	$4\frac{1}{2}$	$4\frac{1}{2}$-$4\frac{3}{4}$
Range of Depths (fm.)	20-46	18-26	24-40	?	35-70	23-45	26-32	?	20-28	20-40

(cont'd.)

TABLE 8 CANADA (Maritimes) - 1958 LENGTH FREQUENCIES - COD by W.R. Martin
(cont'd.) D.N. Fitzgerald

LINERS - Commercial Samples

	Longline							Handline
Subdivision	4V			4X				4T
Month	May	June	July	April	May	June	Dec.	June
3-cm. group	FREQUENCIES in °/oo							
33-35	-	-	2	-	-	3	23	-
36-38	-	1	-	-	-	31	38	-
39-41	11	7	8	6	-	54	61	-
42-44	12	12	27	13	-	95	70	-
45-47	30	28	24	21	2	148	119	-
48-50	53	51	78	39	21	142	142	-
51-53	42	59	73	32	18	101	85	-
54-56	68	61	77	50	18	98	96	-
57-59	103	88	84	70	12	69	38	6
60-62	95	85	65	66	72	53	56	11
63-65	78	73	94	58	156	41	31	29
66-68	75	67	60	40	168	50	45	46
69-71	55	74	48	66	162	25	59	46
72-74	42	58	54	65	138	21	25	57
75-77	44	47	57	56	31	16	28	46
78-80	34	66	62	79	25	9	18	86
81-83	23	48	32	63	26	5	15	91
84-86	31	41	32	44	37	4	10	91
87-89	34	36	25	46	34	3	7	166
90-92	35	26	31	60	24	5	8	91
93-95	35	20	11	30	9	3	3	97
96-98	23	14	15	24	16	8	6	51
99-101	14	16	15	36	10	7	6	29
102-104	12	5	8	17	9	4	6	17
105-107	15	5	8	6	1	2	1	17
108-110	12	5	4	6	7	1	1	6
111-113	14	2	4	4	1	-	1	6
114-116	11	2	-	-	1	-	-	-
117-119	-	2	2	1	1	2	-	11
120-122	-	1	-	3	-	1	-	-
Total °/oo	1001	1000	1000	1001	999	1001	998	1000
Serial Numbers								
Number of Samples	2	5	2	2	1	3	1	1
Number Fish Measured	600	1360	600	900	280	915	300	175
Mean Length (cm.)								
Mean Weight (Kg.)	2.61	3.42	3.24	4.50	3.31	2.14	1.82	5.75
Total Wt. Landed (Tons)	966	138	89	229	136	91	160	
Estimated No. (millions)								
Hook Size	#6/0	#6/0	#6/0	#6/0	#6/0	#6/0	#6/0	
Range of Depths (fm.)	45-55	18-50	18-28	45-70	?	40	29	6

TABLE 9 CANADA (Maritimes) - 1958 LENGTH FREQUENCIES - COD by W.R. Martin
D.N. Fitzgerald

Paired Sea and Wharf Samples taken to determine sizes and quantities discarded at sea

OTTER TRAWLERS

Subdivision	4T							
Month	May		June		June		July	
	Sea	Wharf	Sea	Wharf	Sea	Wharf	Sea	Wharf
3-cm. group	FREQUENCIES in °/oo							
21-23	3	-	-	-	-	-	-	-
24-26	6	-	-	-	-	-	-	-
27-29	11	-	1	-	1	-	-	-
30-32	38	-	6	-	3	-	1	-
33-35	16	-	2	-	8	-	3	-
36-38	39	-	6	-	24	-	9	-
39-41	70	-	15	-	74	3	32	3
42-44	58	-	31	-	78	23	63	20
45-47	39	23	43	19	78	81	81	31
48-50	41	44	68	65	101	98	108	91
51-53	44	87	87	117	98	106	129	142
54-56	36	64	81	112	99	118	118	163
57-59	69	124	85	118	83	103	89	90
60-62	94	117	103	128	80	124	81	87
63-65	84	90	113	111	77	105	80	74
66-68	84	90	99	98	63	103	59	79
69-71	69	100	71	69	49	44	41	57
72-74	51	100	54	43	27	29	30	48
75-77	31	53	38	36	17	19	19	23
78-80	23	38	24	18	11	17	11	26
81-83	22	11	23	24	7	9	12	13
84-86	19	18	17	10	7	4	10	16
87-89	10	16	8	4	5	4	8	12
90-92	10	8	9	9	2	4	4	8
93-95	6	7	4	4	2	3	4	5
96-98	8	2	6	7	3	1	3	8
99-101	5	1	2	2	1	1	2	3
102-104	14	2	1	4	1	1	1	-
105-107		-	1	-	1	-	2	1
108-110		1	2	-	1	-	1	-
111-113		1	-	2	-	-	-	-
114-116		2	1	-	-	-	-	-
117-119		1	1	-	-	-	-	-
Total °/oo	1000	1000	1002	1000	1001	1000	1001	1000
Serial Numbers								
Number of Samples	1	1	1	1		2	3	3
Number Fish Measured	1399	363	1278	340		879	5033	1190
Mean Length (cm.)								
Mean Weight (Kg.)	...	2.66	...	2.40	...	2.14	...	2.08
Total Wt. Landed (Tons)	...	1202	...	2500	...	2500	...	4638
Estimated No. (millions)								
Mesh Size (inches)[1]	4½ m		4½ m		4 m		4½ m	
Range of Depths (fm.)	37-54		50-80		13-100		19-85	

1) m - manilla

(cont'd.)

TABLE 9 CANADA (Maritimes) - 1958 LENGTH FREQUENCIES - COD by W.R. Martin
(cont'd.) D.N. Fitzgerald

Paired Sea and Wharf samples taken to determine sizes and quantities discarded at sea

OTTER TRAWLERS

Subdivision	4T		4W		4V-W	
Month	August		July		August	
	Sea	Wharf	Sea	Wharf	Sea	Wharf
3-cm. group	FREQUENCIES in °/oo					
21-23	3	-	-	-	-	-
24-26	6	-	3	-	-	-
27-29	5	-	9	-	-	-
30-32	6	-	29	-	-	-
33-35	10	-	32	-	3	-
36-38	14	-	28	1	3	-
39-41	26	7	41	24	-	-
42-44	77	37	76	119	6	4
45-47	111	96	105	186	39	28
48-50	91	145	143	215	110	84
51-53	113	160	131	155	217	173
54-56	111	138	113	113	184	142
57-59	90	132	110	79	142	138
60-62	67	67	81	49	78	131
63-65	54	54	52	25	113	108
66-68	46	41	19	25	39	43
69-71	43	38	13	5	19	43
72-74	30	26	7	5	16	7
75-77	22	20	3	-	16	16
78-80	19	11	2	-	6	28
81-83	12	7	1	-	3	9
84-86	13	7	1	-	-	10
87-89	8	2	-	-	3	5
90-92	8	3	-	-	-	10
93-95	4	2	-	-	-	2
96-98	3	4	-	-	-	2
99-101	3	1	-	-	-	5
102-104	2	1	-	-	-	3
105-107	1	-	-	-	-	-
108-110	1	1	-	-	-	3
111-113	-	-	-	-	-	3
-	-	-	-	-	-	-
120-122	-	1	-	-	-	-
123-125	1	-	-	-	-	-
Total °/oo	1000	1001	999	1001	997	997
Serial Numbers						
Number of Samples	3	3	2	2	1	1
Number Fish Measured	5582	1074	1205	765	309	365
Mean Length (cm.)						
Mean Weight (Kg.)	...	1.89	...	1.58	...	2.45
Total Wt. Landed (Tons)	...	5404	...	225	...	
Estimated No. (millions)						
Mesh Size (inches) [1]	4½ m		4½ m		4½ m	
Range of Depths (fm.)	11-60		17-33		20 - 34	

1) m - manilla

TABLE 10 CANADA (Quebec) - 1958 LENGTH FREQUENCIES - COD by A. Marcotte

Commercial Landings

	Otter Trawlers		Long Liners	
Subdivision	4T			
Month	July	September	July	September
3-cm. group	FREQUENCIES in °/oo			
30-32	-	-	1	-
33-35	-	-	1	-
36-38	3	-	2	-
39-41	-	6	1	7
42-44	25	60	8	15
45-47	88	144	15	24
48-50	118	161	9	19
51-53	135	133	8	10
54-56	99	117	20	19
57-59	90	105	33	7
60-62	78	74	35	12
63-65	69	53	54	53
66-68	46	43	68	24
69-71	36	36	96	48
72-74	37	22	92	39
75-77	35	15	84	36
78-80	21	8	82	41
81-83	25	5	69	42
84-86	17	5	54	94
87-89	19	4	68	80
90-92	18	5	55	75
93-95	14	1	37	61
96-98	13	1	21	75
99-101	4	1	22	53
102-104	2	1	14	46
105-107	-	-	7	39
108-110	1	-	18	15
111-113	1	-	2	24
114-116	3	-	9	15
117-119	1	-	3	12
120-122	1	-	3	7
123-125	1	-	3	2
>129	-	-	6[1]	4[2]
Total °/oo	1000	1000	1000	998
Serial Numbers				
Number of Samples	3	2	3	1
Number Fish Measured	951	788	962	413
Mean Length (cm.)				
Mean Weight (Kg.)				
Total Wt. Landed (Tons)	4638	3417	1201	522
Estimated No. (millions)				
Mesh or Hook Size	2½ in.	4½ in.	#14	#14
Range of Depths (fm.)			30-60	

1) 2 at 129-131; 1 at 132-134; 2 at 138-140; 1 at 150-152. 2) 2 at 132-134; 2 at 135-137.

TABLE 11 CANADA (Nfld.) - 1958 LENGTH FREQUENCIES - COD by A.M. Fleming

Commercial Landings

Gear	Otter Trawl Offshore				Cod Trap Inshore		
Subdivision	3N		3O	3P south	3L		3P south
Quarter	January-March	April-June	April-June	January-March	April-June	July-September	July-September
3-cm. group	FREQUENCIES in °/oo						
33-35	-	-	-	-	-	-	2
36-38	3	-	-	-	9	1	15
39-41	20	-	-	12	19	17	65
42-44	53	-	-	31	49	72	87
45-47	121	15	34	89	104	123	129
48-50	193	107	21	106	137	134	140
51-53	291	214	51	161	143	133	152
54-56	140	112	38	95	143	138	139
57-59	56	133	60	65	120	109	114
60-62	49	107	68	80	88	96	63
63-65	25	66	43	69	69	69	39
66-68	10	102	51	60	56	49	28
69-71	12	71	38	29	30	27	8
72-74	12	15	51	37	17	13	8
75-77	1	36	47	49	8	8	5
78-80	6	5	56	37	3	4	2
81-83	5	10	60	40	1	2	1
84-86	1	-	38	20	-	2	2
87-89	1	-	51	9	-	-	-
90-92	-	-	47	3	-	1	1
93-95	-	5	60	6	-	-	-
96-98	-	-	26	-	-	-	-
99-101	-	-	34	3	-	-	-
102-104	-	-	21	-	-	-	-
105-107	-	-	26	-	-	-	-
108-110	-	-	21	-	-	-	-
111-113	-	-	21	-	-	-	-
114-116	-	-	13	-	-	-	-
117-119	-	-	8	-	-	-	-
120-122	-	-	13	-	-	-	-
Total °/oo	999	998	997	1001	996	998	1000
Serial Numbers							
Number of Samples	4	1	1	2	18	26	8
Number Fish Measured	708	196	234	379	3770	5458	2936
Mean Length (cm.)							
Mean Weight (kg.)	1.37	1.99	4.94	2.36	1.55	1.64	1.49
Total Wt. Landed (Tons)	299	142	1016	475	1)	1)	1)
Estimated No. (millions)							
Mesh (in.) or Hook Size	4 man.	4 man.	4 man.	4 man.	4 cot.	4 cot.	4 cot.
Range of Depths (fm.)	50-180	47-150	44-47	80-100	9-18	8-18	14-18

1) Inshore landings are not reported by gear.

(cont'd.)

TABLE 11 CANADA (Nfld.) - 1958 LENGTH FREQUENCIES - COD by A.M. Fleming
(cont'd.)

Commercial Landings

Gear	Line Trawl Inshore					Handline Inshore	
Subdivision	3L	3P north	3P south			3L	
Quarter	July-September	July-September	April-June	July-September	October-December	April-June	July-September
3-cm. group	FREQUENCIES in °/oo						
33-35	1	1	-	1	7	-	-
36-38	4	6	8	10	15	2	1
39-41	11	7	23	28	37	12	4
42-44	20	20	55	41	51	39	15
45-47	33	29	89	44	37	62	28
48-50	65	36	124	75	59	89	54
51-53	67	45	194	102	29	115	77
54-56	101	50	178	119	81	130	108
57-59	101	61	120	111	99	139	147
60-62	112	60	67	108	110	115	163
63-65	100	57	37	86	110	113	128
66-68	95	82	39	69	106	74	110
69-71	69	80	18	54	77	43	68
72-74	66	69	17	42	44	29	36
75-77	47	73	10	34	59	15	27
78-80	31	62	5	25	44	8	10
81-83	25	62	6	15	15	6	7
84-86	23	52	3	11	22	1	5
87-89	8	39	2	7	-	2	3
90-92	7	30	3	5	-	-	3
93-95	5	22	1	4	-	2	1
96-98	4	14	-	3	-	-	1
99-101	1	10	1	3	-	1	-
102-104	1	7	-	3	-	-	-
105-107	2	4	3	-	-	-	-
108-110	1	2	-	-	-	-	-
111-113	1	7	-	2	-	-	-
114-116	1	4	-	-	-	-	-
117-119	1	1	-	-	-	-	-
120-122	-	2	-	-	-	-	-
123-125	1	2	-	-	-	-	-
126-128	-	1	-	-	-	-	-
Total °/oo	1004	997	1003	1002	1002	997	996
Serial Numbers							
Number of Samples	14	11	3	12	1	14	33
Number Fish Measured	2602	2096	720	3697	143	2660	4620
Mean Length (cm.)							
Mean Weight (kg.)	2.50	3.81	1.70	2.25	2.25	1.90	2.17
Total Wt. Landed (Tons)	1)	1)	1)	1)	1)	1)	1)
Estimated No.(millions)							
Hook Size	#14	#17	#14-17	#14-17	#14-17	#11-14	#11-14
Range of Depths (fm.)	12-50	25-106	10-50	10-80	55-60	7-20	7-35

1) Inshore landings are not reported by gear.

(cont'd.)

TABLE 11 CANADA (Nfld.) - 1958 (cont'd.) LENGTH FREQUENCIES - COD by A.M. Fleming

Commercial Landings

Gear	Longline Inshore			Jigger Inshore			
Subdivision	3L			3L			3P south
Quarter	April-June	July-September	October-December	April-June	July-September	October-December	July-September
3-cm. group	FREQUENCIES in °/oo						
36-38	-	-	-	8	8	-	4
39-41	2	-	-	38	8	3	67
42-44	4	1	-	68	33	5	88
45-47	14	7	-	143	91	57	77
48-50	22	13	24	135	74	95	111
51-53	45	24	39	150	107	111	115
54-56	60	49	80	195	58	98	132
57-59	97	85	115	83	124	102	129
60-62	122	137	184	68	74	133	96
63-65	132	174	155	53	74	103	77
66-68	122	156	111	45	99	103	38
69-71	89	115	98	-	66	66	42
72-74	64	74	65	-	25	26	4
75-77	48	50	42	15	50	23	8
78-80	35	32	34	-	41	23	8
81-83	26	23	10	-	-	25	4
84-86	22	18	14	-	17	4	-
87-89	19	12	4	-	8	6	-
90-92	14	9	2	-	17	4	-
93-95	13	8	3	-	8	9	-
96-98	16	3	3	-	-	-	-
99-101	10	4	8	-	-	-	-
102-104	5	1	5	-	8	-	-
105-107	6	1	-	-	-	4	-
108-110	3	1	-	-	-	-	-
111-113	2	-	-	-	-	-	-
114-116	3	-	-	-	-	-	-
117-119	1	-	-	-	-	-	-
120-122	1	-	-	-	8	-	-
123-125	1	-	-	-	-	-	-
126-128	1	-	2	-	-	-	-
132-137	1	-	2	-	-	-	-
Total °/oo	1000	997	1000	1001	998	1000	1000
Serial Numbers							
Number of Samples	13	28	3	1	1	3	1
Number Fish Measured	2120	3802	300	100	121	300	251
Mean Length (cm.)							
Mean Weight (kg.)	3.14	2.83	2.68	1.45	2.47	2.23	1.67
Total Wt. Landed (Tons)	1)	1)	1)	1)	1)	1)	1)
Estimated No. (millions)							
Hook Size	#17	#17	#17	#11	#11	#11	#11
Range of Depths (fm.)	120-160	105-162	125-145	15	20	20-35	18-20

1) Inshore landings are not reported by gear.

TABLE 12 GERMANY - 1958 LENGTH FREQUENCIES - COD[1] by Arno Meyer

OTTER TRAWLERS - Commercial Landings

Subdivision	1D				1F			2J		3Ps	3O
Month	March	April	May	June	Jan.-Feb.	May	Dec.-Feb.'59	Oct.	Dec.	Feb.	March
3-cm. group	FREQUENCIES in °/oo										
39-41	-	-	-	-	-	-	-	-	-	5	-
42-44	-	-	11	-	-	-	1	1	4	16	4
45-47	1	-	32	3	7	1	2	7	11	47	63
48-50	9	1	73	9	20	4	16	12	10	107	138
51-53	17	4	78	30	25	22	30	66	67	112	138
54-56	28	13	59	52	33	73	56	82	138	120	145
57-59	41	26	84	82	52	120	59	154	109	99	110
60-62	64	55	117	80	72	153	56	150	147	67	139
63-65	70	71	52	69	114	157	98	134	184	53	71
66-68	78	84	90	99	126	165	171	77	125	57	54
69-71	54	94	71	125	138	154	154	83	79	49	33
72-74	67	110	108	155	134	89	171	52	53	48	25
75-77	109	105	45	133	138	40	97	43	37	45	18
78-80	119	113	59	82	75	12	43	37	19	69	14
81-83	129	92	38	42	35	5	38	35	2	54	12
84-86	95	71	23	20	20	5	5	24	7	23	10
87-89	29	45	18	12	6	-	2	8	1	13	6
90-92	37	44	9	3	4	-	1	9	1	10	6
93-95	14	24	16	1	1	-	-	4	1	3	4
96-98	12	15	6	1	-	-	-	5	1	2	3
99-101	13	4	2	1	-	-	-	2	3	1	3
102-104	9	10	3	1	-	-	-	5	1	-	1
105-107	2	4	2	-	-	-	-	4	-	-	1
108-110	1	6	1	-	-	-	-	-	-	-	1
111-113	-	3	-	-	-	-	-	2	-	-	-
114-116	-	1	2	-	-	-	-	2	-	-	-
117-119	-	-	1	-	-	-	-	2	-	-	1
120-122	-	1	-	-	-	-	-	-	-	-	-
123-125	1	2	-	-	-	-	-	-	-	-	-
126-128	-	-	-	-	-	-	-	-	-	-	-
129-131	1	1	-	-	-	-	-	-	-	-	-
132-134	-	1	-	-	-	-	-	-	-	-	-
Total °/oo	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Serial Numbers	17	26,29, 31	37	42,43, 46,49, 50	1,8,12, 14,15	38	67,9	63	70	9	23
Number of Samples	1	3	1	5	5	1	2	1	1	1	1
Number Fish Measured	467	1166	325	2423	2461	437	796	299	374	576	518
Mean Length (cm.)											
Mean Weight (kg.)	4.24	4.27	2.57	2.77	2.68	2.27	2.78	2.64	2.26	2.35	2.08
Total Wt. Landed (Tons)	683	292	820	9887	5708	1243	925+	40	370	125	65
Estimated No.(millions)	0.16	0.07	0.32	0.36	2.13	0.55	0.33+	0.02	0.16	0.05	0.03
Mesh Size (mm.)	110	110	110	110	110	110	110	110	110	110	110
Range of Depths (fm.)											

(cont'd.)

1) The age frequencies of these samples are given in Table 24; the age/length keys are given in Table 29.

TABLE 12 GERMANY - 1958 (cont'd.) LENGTH FREQUENCIES - COD[1] by Arno Meyer

OTTER TRAWLERS - Commercial Landings

Location	East Greenland		
	Angmagssalik	Dohrn Bank	Dohrn Bank
Month	March	March	Aug.-Sept.
3-cm. group	FREQUENCIES in °/oo		
45-47	-	2	-
48-50	-	10	-
51-53	-	17	1
54-56	6	13	-
57-59	19	11	2
60-62	50	37	9
63-65	75	90	28
66-68	130	85	47
69-71	128	132	74
72-74	155	166	101
75-77	120	126	121
78-80	130	110	132
81-83	79	76	133
84-86	37	55	101
87-89	31	24	84
90-92	18	19	53
93-95	11	10	39
96-98	6	9	29
99-101	2	2	21
102-104	-	4	13
105-107	2	-	8
108-110	1	-	-
111-113	-	-	-
114-116	-	2	-
117-119	-	-	4
Total °/oo	1000	1000	1000
Serial Numbers	19	24	56,62
Number of Samples	1	1	2
Number Fish Measured	616	459	786
Mean Length (cm.)			
Mean Weight (kg.)	3.32	3.53	5.02
Total Wt. Landed (Tons)			
Estimated No. (millions)			
Mesh Size (mm.)	110	110	110
Range of Depths (fm.)			

[1] The age frequencies of these samples are given in Table 24; the age/length keys are given in Table 29.

TABLE 13 GERMANY - 1958 LENGTH FREQUENCIES - COD[1] by Arno Meyer

OTTER TRAWLERS - Research Samples

Vessel	Everling	Saarbrücken	Everling	Saarbr.	Everling	Saarbr.	A. Dohrn
Subdivision	1B		1D		1F		
Month	August	September	August	September	August	September	September
3-cm. group	FREQUENCIES in °/oo						
15-17	-	-	-	-	-	-	4
18-20	-	-	-	-	2	-	4
21-23	-	-	22	-	14	1	59
24-26	-	-	58	-	26	15	119
27-29	-	-	36	-	37	34	81
30-32	-	-	14	-	13	5	21
33-35	1	5	29	-	15	2	26
36-38	2	12	29	-	10	9	13
39-41	14	17	22	-	14	8	4
42-44	26	37	14	-	24	20	13
45-47	57	50	18	-	52	28	26
48-50	67	75	11	6	70	40	30
51-53	130	99	47	13	103	77	30
54-56	133	114	43	51	73	94	17
57-59	119	148	40	57	50	74	34
60-62	106	128	32	70	69	72	17
63-65	55	91	25	89	60	82	68
66-68	47	41	50	38	91	89	128
69-71	62	35	90	121	87	100	115
72-74	67	39	112	108	70	99	94
75-77	52	29	123	115	53	85	55
78-80	34	38	94	134	27	40	17
81-83	21	15	54	64	14	12	13
84-86	5	10	22	45	10	8	4
87-89	-	8	4	38	7	3	4
90-92	2	3	4	19	2	-	-
93-95	-	3	4	19	1	3	-
96-98	-	1	-	6	3	-	-
99-101	-	1	-	6	1	-	-
102-104	-	-	-	-	-	-	-
105-107	-	1	-	-	-	-	-
>114	-	-	3	-	2	-	4
Total °/oo	1000	1000	1000	999	1000	1000	1000
Serial Numbers							
Number of Samples	4	8	2	1	5	4	1
Number Fish Measured	1396	2016	294	157	1256	649	235
Mean Length (cm.)							
Mean Weight (kg.)	1.75	1.91	2.38	4.78	1.83	2.27	2.02
Total Wt. Landed (Tons)							
Estimated No.(millions)							
Mesh Size (mm.)	110	110	110	110	110	110	110
Range of Depths (fm.)	60-135	32-105	115-135	50	125-200	105-155	125-135

1) The age frequencies of these samples are given in Table 25; the age/length keys are given in Table 30.

TABLE 14 ICELAND - 1958 LENGTH FREQUENCIES - COD[2] by Jón Jónsson

OTTER TRAWLERS - Exploratory Catches

Subdivision	1C	2H			2J			2J-3K			3K		
Month	Aug.	July			July			September			September		
Sex	1)	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total
3-cm. group		FREQUENCIES in °/oo											
24-26	-	-	-	-	-	-	-	10	-	10	-	-	-
27-29	-	-	-	-	-	9	9	-	10	10	-	-	-
30-32	-	-	-	-	-	-	-	30	20	50	-	10	10
33-35	-	-	-	-	9	-	9	20	30	50	24	10	34
36-38	-	-	-	-	-	-	-	10	-	10	10	14	24
39-41	-	19	-	19	26	9	35	10	30	40	14	10	24
42-44	-	-	19	19	34	17	51	-	-	-	24	19	43
45-47	9	47	47	94	17	26	43	-	20	20	57	43	100
48-50	45	66	75	141	86	43	129	-	30	30	57	91	148
51-53	36	57	113	170	69	95	164	30	80	110	48	77	125
54-56	80	57	142	199	60	112	172	60	40	100	67	57	124
57-59	54	66	104	170	17	86	103	30	100	130	38	115	153
60-62	71	28	66	94	34	52	86	50	80	130	33	48	81
63-65	54	-	38	38	9	69	78	10	90	100	24	38	62
66-68	18	-	28	28	17	34	51	10	10	20	-	14	14
69-71	107	9	19	28	-	9	9	10	30	40	-	14	14
72-74	62	-	-	-	-	17	17	10	30	40	14	5	19
75-77	62	-	-	-	-	17	17	-	10	10	-	14	14
78-80	125	-	-	-	9	9	18	-	-	-	-	-	-
81-83	107	-	-	-	-	-	-	10	-	10	-	-	-
84-86	45	-	-	-	-	-	-	-	10	10	-	-	-
87-89	27	-	-	-	-	-	-	20	-	20	-	-	-
90-92	27	-	-	-	-	-	-	-	20	20	-	-	-
93-95	9	-	-	-	-	-	-	10	-	10	-	5	5
96-98	-	-	-	-	-	-	-	-	10	10	-	-	-
99-101	18	-	-	-	-	-	-	10	-	10	-	-	-
102-104	-	-	-	-	-	9	9	-	-	-	-	-	-
105-107	-	-	-	-	-	-	-	-	-	-	-	-	-
108-110	9	-	-	-	-	-	-	-	-	-	-	-	-
111-113	-	-	-	-	-	-	-	-	-	-	-	-	-
114-116	9	-	-	-	-	-	-	-	-	-	-	-	-
117-119	-	-	-	-	-	-	-	-	10	10	-	-	-
129-131	18	-	-	-	-	-	-	-	-	-	-	-	-
141-143	9	-	-	-	-	-	-	-	-	-	-	-	-
?	-	-	-	-	-	-	-	-	-	-	5	-	5
Total °/oo	1001	349	651	1000	387	613	1000	340	660	1000	415	584	999
Serial Numbers	4			2			1,3			5			6,7
Number of Samples	1			1			2			1			2
Number Fish Measured	112	37	69	106	45	71	116	34	66	100	87	122	209
Mean Length (cm.)													
Mean Weight (kg.)													
Total Wt. Landed(Tons)										92			28
Est. No. (millions)													
Mesh Size (mm.)manilla	110			110			110			110			110
Range of Depths (fm.)	100-140			130-230			168-215			170			156-170

1) Data for males and females separately were not available.

2) The age frequencies of these samples are given in Table 26; the age/length keys are given in Table 31.

TABLE 15 NORWAY - 1958 LENGTH FREQUENCIES - COD[1)] by E. Bratberg
B. Rasmussen

BOTTOM LONGLINE - Catches West Greenland

Subdivision	1C			1D		
Month	July			June		
Sex	♂♂	♀♀	Total	♂♂	♀♀	Total
3-cm. group	FREQUENCIES in °/oo					
48-50	-	-	-	1	-	1
51-53	3	3	6	9	2	11
54-56	3	10	13	16	17	33
57-59	3	7	10	25	28	53
60-62	20	3	23	20	23	43
63-65	13	33	46	24	30	54
66-68	17	43	60	34	47	81
69-71	27	40	67	48	50	98
72-74	87	97	184	73	78	151
75-77	97	67	164	74	70	144
78-80	97	87	184	80	49	129
81-83	54	43	97	46	29	75
84-86	60	10	70	30	24	54
87-89	20	3	23	18	8	26
90-92	3	3	6	13	6	19
93-95	20	3	23	9	4	13
96-98	10	-	10	4	4	8
99-101	7	-	7	2	2	4
102-104	-	-	-	2	-	2
105-107	3	-	3	-	-	-
108-110	-	-	-	-	-	-
111-113	-	-	-	1	-	1
Total °/oo	544	452	996	529	471	1000
Serial Numbers						
Number of Samples						
Number Fish Measured	163	136	299	556	498	1054
Mean Length (cm.)						
Mean Weight (kg.)						
Total Wt. Landed (Tons)			53			757
Estimated No. (millions)						
Hook Size			#7			#7
Range of Depths (m.)			120			110-285

1) The age frequencies of these samples are given in Table 27.

TABLE 16 PORTUGAL - 1958 LENGTH FREQUENCIES - COD by Mario Ruivo
Glicinia V. Quartin

OTTER TRAWLERS - Commercial Catches before Discarding

Subdivision	1C [1]	1D [1]	2J [1]		3K	
Month	June	June	September	October	August	November
3-cm. group	FREQUENCIES in °/oo					
30-32	-	-	1	5	1	-
33-35	-	1	5	13	-	1
36-38	1	2	12	28	18	10
39-41	22	5	14	18	52	21
42-44	33	6	16	13	55	29
45-47	64	18	41	37	57	20
48-50	73	18	59	52	81	56
51-53	92	18	95	82	103	77
54-56	110	33	134	127	120	116
57-59	119	40	154	150	142	139
60-62	73	44	167	169	140	167
63-65	63	60	135	135	86	119
66-68	45	91	69	68	55	111
69-71	67	147	44	42	36	77
72-74	79	175	31	29	11	31
75-77	58	121	10	11	9	18
78-80	48	99	8	10	11	6
81-83	26	55	4	7	7	3
84-86	12	33	2	4	1	-
87-89	5	22	1	2	4	-
90-92	4	6	1	-	7	-
93-95	2	4	-	-	-	-
96-98	-	-	-	-	1	-
99-101	-	1	-	-	1	-
102-104	-	2	-	-	-	-
Total °/oo	996	1001	1003	1002	998	1001
Serial Numbers	4,5,6,7, 8,9,14	11,12,13	1,2,3, 4,5,6	7,8,9, 10,11		
Number of Samples	7	3	6	5	4	3
Number Fish Measured	793	298	1103	704	823	714
Mean Length (cm.)						
Mean Weight (kg.)						
Total Wt. Landed (Tons)						
Estimated Number Landed						
Mesh Size (mm.)	117	117	117	117	117	117
Range of Depths (fm.)						

[1] The age frequencies of these samples are given in Table 28.

(cont'd.)

TABLE 16 PORTUGAL - 1958 LENGTH FREQUENCIES - COD by Mario Ruivo
(cont'd.) Glicinia V. Quartin

OTTER TRAWLERS - Commercial Catches before Discarding

Subdivision	3L	4R 1)		4T 1)	4V 1)	
Month	August	March	April	April	March	April
3-cm. group	FREQUENCIES in /oo					
24-26	-	1	-	-	-	-
27-29	-	2	-	-	-	-
30-32	-	1	-	2	6	-
33-35	7	7	4	5	10	2
36-38	15	19	13	12	18	6
39-41	79	34	46	27	34	10
42-44	65	41	62	34	42	12
45-47	97	70	137	72	49	73
48-50	84	84	138	95	67	89
51-53	69	112	140	140	103	121
54-56	92	88	103	116	91	142
57-59	83	76	85	104	85	152
60-62	85	125	88	98	73	103
63-65	88	105	73	93	79	95
66-68	92	64	43	82	91	79
69-71	69	50	22	49	63	47
72-74	17	43	12	32	49	31
75-77	25	18	10	12	24	6
78-80	15	16	8	9	26	10
81-83	4	11	6	2	31	18
84-86	3	10	4	5	26	6
87-89	7	10	4	6	24	-
90-92	-	3	1	-	6	-
93-95	-	3	1	-	4	-
96-98	-	3	-	-	-	-
99-101	1	1	-	-	-	-
102-104	-	-	-	-	-	-
105-107	-	-	-	-	-	-
108-110	1	-	-	-	-	-
111-113	-	-	-	-	-	-
114-116	1	1	-	-	-	-
117-119	-	1	-	-	-	-
-	-	-	-	-	-	-
144-146	-	1	-	-	-	-
147-149	-	1	-	-	-	-
Total /oo	999	1001	1000	995	1001	1002
Serial Numbers		3,4,5,6,7	9,10,11 12,15,16	14,17,18	1,2	19
Number of Samples	3	5	6	3	2	1
Number Fish Measured	750	591	496	299	99	99
Mean Length (cm.)						
Mean Weight (Kg.)						
Total Wt. Landed (Tons)						
Estimated Number Landed						
Mesh Size (mm.)	117	117	117	117	117	117
Range of Depths (fm.)						

1) The age frequencies of these samples are given in Table 28.

(cont'd.)

TABLE 16 PORTUGAL - 1958 LENGTH FREQUENCIES - COD by Mario Ruivo
(cont'd.) Glicinia V. Quartin

DORY VESSELS - Commercial Catches before Discarding

Subdivision	1D1)	3O		3P
Month	May-June	April	May	May
3-cm. group	FREQUENCIES in °/oo			
33-35	-	3	-	-
36-38	-	-	-	-
39-41	-	7	4	-
42-44	-	-	12	-
45-47	-	10	8	-
48-50	-	14	16	17
51-53	-	14	4	6
54-56	1	31	37	9
57-59	2	27	29	29
60-62	20	27	20	29
63-65	33	24	45	38
66-68	58	31	24	55
69-71	131	31	37	67
72-74	168	61	29	52
75-77	204	68	37	76
78-80	177	65	33	84
81-83	124	75	41	64
84-86	53	71	78	87
87-89	18	54	73	73
90-92	6	44	61	49
93-95	4	10	45	41
96-98	-	24	29	29
99-101	-	54	73	64
102-104	-	17	33	17
105-107	-	27	33	15
108-110	-	31	24	29
111-113	-	41	45	26
114-116	-	34	24	9
117-119	-	24	29	6
120-122	-	20	20	3
123-125	-	20	16	6
126-128	-	34	16	9
129-131	-	7	16	6
132-134	-	-	4	3
135-137	-	-	4	-
Total °/oo	999	1000	999	998
Serial Numbers	1,2,3			
Number of Samples	3	1	1	1
Number Fish Measured	300	294	245	343
Mean Length (cm.)				
Mean Weight (Kg.)				
Total Weight Landed (Tons)				
Estimated Number Landed				
Hook Size	#14½	#14½	#14½	#14½
Range of Depths (fm.)				

1) The age frequencies of these samples are given in Table 28.

TABLE 17 SPAIN - 1958 LENGTH FREQUENCIES - COD by O. Rodriguez M.

OTTER TRAWLER, "Aliseo" - Commercial Catch

Subdivision	1B	1C		1D	1E	
Month	June	May	June	May	June	July
3-cm. group	FREQUENCIES in ‰					
30-32	-	-	1	-	-	-
33-35	-	-	2	-	-	-
36-38	-	-	3	-	-	-
39-41	-	-	6	10	-	-
42-44	-	-	16	21	-	-
45-47	10	11	27	19	-	4
48-50	31	39	36	45	10	16
51-53	59	61	46	57	28	36
54-56	200	85	104	72	55	80
57-59	186	112	101	85	78	92
60-62	171	117	104	86	93	97
63-65	139	130	102	104	119	136
66-68	97	133	98	85	123	139
69-71	51	89	91	100	122	133
72-74	36	85	78	93	129	92
75-77	13	65	62	61	100	72
78-80	5	26	49	45	63	50
81-83	-	29	31	43	33	26
84-86	-	10	22	30	19	12
87-89	-	5	12	30	13	8
90-92	-	-	3	10	6	3
93-95	-	-	1	3	2	2
96-98	-	-	2	2	2	-
99-101	-	-	1	1	-	-
Total ‰	998	997	998	1002	995	998
Serial Numbers						
Number of Samples	7	4	8	14	16	38
Number Fish Measured	1198	964	1383	2160	2620	6669
Mean Length (cm.)						
Mean Weight (Kg.)						
Total Wt. Landed (Tons)	231	7096	8600	4352	1421	209
Estimated Number Landed						
Mesh Size (mm.)1)	160	160	160	160	160	160
Range of Depths (m.)	230-280	155-175	150-165	180-200	150-200	205-320

1) Mesh Size - new, dry measure.

TABLE 18 UNION OF SOVIET SOCIALIST REPUBLICS - 1958

LENGTH FREQUENCIES - COD

by J. Marti
V.I. Travin

OTTER TRAWLERS - Exploratory (Commercial) Catches

Subdivision	1B		1C	1D			1E	3L
Month	July	August	May	April	May	June	May	April
3-cm. group	FREQUENCIES in °/oo							
18-20	-	-	-	-	-	-	1	-
21-23	-	-	-	-	-	-	1	-
24-26	-	-	2	-	-	-	1	2
27-29	-	-	7	1	1	-	1	7
30-32	-	-	16	1	1	1	10	5
33-35	-	-	20	1	2	1	14	4
36-38	-	-	68	5	2	19	4	15
39-41	3	3	82	12	5	27	9	35
42-44	8	8	111	27	11	45	19	74
45-47	46	18	143	62	49	64	56	87
48-50	65	23	158	80	67	73	75	93
51-53	88	25	109	182	148	112	205	137
54-56	96	60	95	170	134	104	181	132
57-59	112	130	69	148	106	88	134	122
60-62	126	183	39	104	78	62	72	89
63-65	134	210	24	82	64	49	41	73
66-68	97	107	18	28	69	55	41	33
69-71	82	86	15	29	72	60	38	26
72-74	52	43	8	31	79	70	31	13
75-77	33	38	7	17	48	54	21	9
78-80	23	35	7	10	33	47	16	7
81-83	11	14	1	4	14	29	8	8
84-86	10	11	1	3	10	23	8	8
87-89	7	4	1	1	3	10	6	8
90-92	5	1	1	1	2	5	4	5
93-95	4	-	1	1	1	2	4	4
96-98	-	-	-	-	-	1	-	-
>98	-	-	-	-	-	1	-	4
Total °/oo	1002	999	1003	1000	999	1002	1001	1000
Serial Numbers								
Number of Samples								
Number Fish Measured	3541	1078	5369	2524	4361	4361	1454	678
Mean Length (cm.)	61.80	63.55	49.26	56.08	60.75	60.61	56.94	55.23
Mean Weight (kg.)								
Total Wt. Landed (Tons)	1)	1)	1)	1)	1)	1)	1)	282
Estimated No. (millions)								
Mesh or Hook Size								
Range of Depths (fm.)								

1) No landings reported in the statistics.

(cont'd.)

TABLE 18 (cont'd.) UNION OF SOVIET SOCIALIST REPUBLICS - 1958 — LENGTH FREQUENCIES - COD — by J. Marti, V.I. Travin

OTTER TRAWLERS - Exploratory (Commercial) Catches

Subdivision	3L		3M					3N	3O
Month	August	Dec.	March	April	May	August	Sept.	April	April
3-cm. group	FREQUENCIES in °/oo								
21-23	4	1	-	4	1	-	-	-	-
24-26	5	2	-	2	1	-	-	-	-
27-29	9	4	-	-	1	1	-	1	-
30-32	7	8	2	12	5	1	-	7	4
33-35	5	10	3	19	7	1	-	10	5
36-38	15	27	34	77	34	25	2	19	14
39-41	12	31	46	112	65	60	20	35	31
42-44	7	40	72	183	127	131	58	68	64
45-47	21	53	69	153	110	149	94	124	82
48-50	28	60	67	137	102	158	112	152	91
51-53	44	88	135	88	72	140	133	220	122
54-56	50	98	139	72	75	120	133	167	105
57-59	61	120	146	41	80	80	131	59	71
60-62	88	104	105	32	66	52	94	38	69
63-65	101	95	85	28	59	38	75	28	68
66-68	70	86	35	19	44	11	37	20	43
69-71	57	69	27	13	41	10	29	17	43
72-74	31	35	12	2	34	7	14	11	43
75-77	44	24	6	2	21	5	9	5	32
78-80	50	18	4	2	15	4	7	1	27
81-83	41	5	2	-	7	1	2	2	26
84-86	40	6	2	-	6	1	5	2	21
87-89	38	6	2	-	5	1	13	1	11
90-92	32	3	2	-	4	2	9	2	7
93-95	29	1	1	-	4	2	7	2	5
96-98	26	1	-	-	-	-	3	-	2
>98	85	8	3	3	10	3	13	2	8
Total °/oo	1000	1003	999	1001	996	1003	1000	993	994
Serial Numbers									
Number of Samples									
Number Fish Measured	326	1515	4513	350	467	1126	375	475	845
Mean Length (cm.)	70.17	58.40	54.82	47.64	54.28	51.18	57.07	52.17	58.85
Mean Weight (kg.)									
Total Wt. Landed (Tons)	42	1	853	50	221	669	9	1)	1)
Estimated No. (millions)									
Mesh or Hook Size									
Range of Depths (fm.)									

1) No landings reported in the statistics.

TABLE 19 UNITED KINGDOM - 1958 LENGTH FREQUENCIES - COD[1] by G.C. Trout R.W. Blacker

OTTER TRAWLERS - Commercial Landings Subarea 1

3-cm. group	Total No. Caught (Thousands)	%	No. per 100 Hours Fishing
39-41	1	-	19
42-44	24	7	300
45-47	68	19	838
48-50	214	58	2631
51-53	331	90	4059
54-56	345	94	4230
57-59	251	68	3090
60-62	272	74	3343
63-65	285	78	3498
66-68	310	84	3806
69-71	392	107	4812
72-74	433	118	5315
75-77	269	73	3296
78-80	229	62	2806
81-83	149	41	1828
84-86	63	17	771
87-89	20	5	243
90-92	7	2	88
93-95	5	1	67
96-98	2	-	25
99-101	1	-	18
102-104	1	-	15
105-107	-	-	1
108-110	-	-	1
111-113	-	-	2
114-116	-	-	2
117-119	-	-	1
120-122	-	-	2
123-125	-	-	7
126-128	1	-	18
129-131	-	-	6
132-134	-	-	1
135-137	1	-	13
138-140	1	-	8
-	-	-	-
150-152	-	-	1
Total	3675	998	45161
Serial Numbers			
Number of Samples			
Number Fish Measured		2841	
Mean Length (cm.)			
Mean Weight (kg.)			
Total Wt. Landed (Tons)			
Estimated No. (millions)			
Mesh or Hook Size			
Range of Depths (fm.)			
Total Hours Fished		8156	

1) The age/length composition is given in Table 33.

TABLE 20 UNITED STATES - 1958 LENGTH FREQUENCIES - COD by J.P. Wise H.E. Murray

OTTER TRAWLERS Subdivision 5Y

Month	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
3-cm. group	FREQUENCIES in °/oo											
27-29	-	28	-	-	-	-	-	-	-	-	-	-
30-32	-	-	-	-	-	-	-	-	-	-	-	-
33-35	-	-	-	-	-	-	-	-	-	-	2	-
36-38	10	43	-	-	-	-	10	-	-	2	7	-
39-41	10	32	2	5	1	-	36	22	7	11	87	-
42-44	53	62	7	52	27	-	117	80	11	74	166	-
45-47	67	87	40	134	60	18	150	139	50	114	120	-
48-50	134	98	70	124	134	78	164	151	73	118	137	17
51-53	238	74	89	155	147	130	124	126	92	113	118	60
54-56	158	83	113	97	135	111	68	101	139	117	87	60
57-59	42	73	98	91	90	55	76	102	129	91	45	109
60-62	42	78	58	63	100	129	55	46	127	70	37	103
63-65	24	52	65	29	58	36	52	48	75	63	42	76
66-68	44	50	50	35	40	63	37	36	54	44	73	28
69-71	24	37	50	46	49	40	35	22	63	6	37	28
72-74	19	48	70	10	23	15	23	20	47	22	13	40
75-77	81	50	82	42	33	32	12	24	18	25	5	72
78-80	15	25	39	27	16	47	10	16	20	24	12	88
81-83	5	12	25	12	12	23	2	13	14	24	1	55
84-86	10	22	33	20	18	38	7	11	14	23	3	105
87-89	5	17	32	12	11	27	5	9	14	12	-	33
90-92	-	2	4	9	11	20	2	11	2	2	1	22
93-95	14	11	16	4	5	12	2	10	10	11	4	38
96-98	-	3	12	8	4	33	4	5	16	15	1	38
99-101	5	6	7	5	4	21	1	1	7	3	-	-
102-104	-	2	5	4	2	3	3	2	2	2	-	-
105-107	-	-	12	5	5	15	3	1	6	3	1	17
108-110	-	2	4	6	3	15	2	1	1	2	-	-
111-113	-	-	3	-	1	-	-	3	4	-	-	11
114-116	-	1	9	2	3	21	-	-	2	5	1	-
117-119	-	1	-	2	3	9	-	-	2	-	-	-
120-122	-	-	4	1	-	9	-	-	-	2	-	-
123-125	-	-	1	-	2	-	-	-	1	2	-	-
126-128	-	1	-	-	3	-	-	-	-	-	-	-
Total °/oo	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Serial Numbers												
Number of Samples	6	10	11	9	8	5	13	8	7	7	8	4
Number Fish Measured	191	477	489	422	457	336	964	608	429	567	491	135
Mean Length (cm.)												
Mean Weight (kg.)												
Tot. Wt. Landed(Tons)	341.9	219.4	163.8	227.6	244.9	349.6	587.9	264.0	54.0	134.0	335.7	484.0
Est. No. (millions)	0.153	0.085	0.044	0.088	0.100	0.099	0.291	0.119	0.018	0.050	0.182	0.108
Mesh or Hook Size												
Range of Depths (fm.)												

(cont'd.)

TABLE 20 UNITED STATES - 1958 LENGTH FREQUENCIES - COD by J.P. Wise
(cont'd.) H.E. Murray

OTTER TRAWLERS Subdivision 5Z

Month	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
3-cm. group	FREQUENCIES in °/oo											
36-38	-	-	1	-	-	-	-	-	-	-	-	-
39-41	12	5	29	40	10	10	4	12	-	6	24	-
42-44	53	77	239	89	26	56	31	53	59	24	48	37
45-47	179	162	296	196	198	189	121	184	247	81	122	110
48-50	220	203	190	241	317	222	234	228	345	266	163	202
51-53	110	138	42	133	250	287	317	206	174	324	270	248
54-56	23	76	20	132	129	137	134	152	105	184	188	216
57-59	12	47	11	41	37	59	83	81	33	69	89	85
60-62	22	57	11	23	12	14	24	34	12	18	32	69
63-65	43	53	26	23	5	10	19	13	3	13	24	23
66-68	47	25	33	27	1	6	8	16	4	10	24	2
69-71	34	20	33	15	5	6	12	5	5	2	16	1
72-74	49	61	16	14	10	3	5	4	3	2	-	3
75-77	33	22	19	15	-	1	5	4	1	1	-	-
78-80	25	12	12	4	-	-	3	4	2	-	-	3
81-83	18	14	12	4	-	-	-	-	3	-	-	1
84-86	16	3	8	2	-	-	-	-	2	-	-	-
87-89	17	7	2	1	-	-	-	4	1	-	-	-
90-92	17	5	-	-	-	-	-	-	1	-	-	-
93-95	21	2	-	-	-	-	-	-	-	-	-	-
96-98	12	2	-	-	-	-	-	-	-	-	-	-
99-101	8	1	-	-	-	-	-	-	-	-	-	-
102-104	4	3	-	-	-	-	-	-	-	-	-	-
105-107	4	3	-	-	-	-	-	-	-	-	-	-
108-110	-	-	-	-	-	-	-	-	-	-	-	-
111-113	9	2	-	-	-	-	-	-	-	-	-	-
114-116	4	-	-	-	-	-	-	-	-	-	-	-
117-119	4	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
135-137	4	-	-	-	-	-	-	-	-	-	-	-
Total °/oo	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Serial Numbers												
Number of Samples	4	6	5	4	3	7	13	3	6	4	1	2
Number Fish Measured	349	440	505	313	376	866	1781	363	448	373	122	314
Mean Length (cm.)												
Mean Weight (kg.)												
Tot. Wt. Landed(Tons)	357.5	563.6	1013.1	386.1	824.7	853.4	1078.4	1578.4	1304.6	1077.1	1106.4	503.6
Est. No. (millions)	0.116	0.258	0.608	0.235	0.539	0.550	0.640	0.950	0.866	0.656	0.654	0.297
Mesh or Hook Size												
Range of Depths (fm.)												

TABLE 21 DENMARK - 1958 AGE FREQUENCIES - COD by Paul M. Hansen
with mean length at each age by sexes

East Greenland

Location		Angmagssalik Bank abt. 65°20'N, 37°00'W.			Angmagssalik Bank 65°21'N, 37°01'W.			Angmagssalik 65°35'N, 37°35'W.		
Date		August-September			22nd August			25th August		
Gear		Longline			Handline			Handline		
Year-Class	Age-Group		Mean Length			Mean Length			Mean Length	
		°/oo	♂♂	♀♀	°/oo	♂♂	♀♀	°/oo	♂♂	♀♀
1954	IV	51	47.0	55.0	54	50.0	-	196	52.5	52.9
1953	V	63	64.0	56.3	54	56.0	56.0	65	59.5	62.1
1952	VI	76	66.0	65.5	81	62.5	53.0	167	65.3	64.2
1951	VII	89	66.0	75.3	54	71.0	89.0	208	70.1	68.8
1950	VIII	190	79.9	75.9	595	85.7	85.7	304	74.7	73.9
1949	IX	89	90.0	88.6	108	95.0	92.5	48	80.7	76.5
1948	X	-	-	-	27	-	92.0	-	-	-
1947	XI	76	80.5	94.3	27	-	90.0	-	-	-
1946	XII	-	-	-	-	-	-	-	-	-
1945	XIII	38	104.0	89.0	-	-	-	6	-	88.0
1944	XIV	-	-	-	-	-	-	-	-	-
1943	XV	25	105.0	106.0	-	-	-	-	-	-
1942	XVI	215	108.0	113.4	-	-	-	6	-	102.0
1941	XVII	25	-	108.5	-	-	-	-	-	-
1940	XVIII	13	-	111.0	-	-	-	-	-	-
1939	XIX	51	-	116.8	-	-	-	-	-	-
Total °/oo		1001			1000			1000		
Number of Fish			79			37			168	
Serial Numbers			1			2			3	
Depth (metres)			160-200			170-200			80-150	

(cont'd.)

TABLE 21 DENMARK - 1958 (cont'd.) AGE FREQUENCIES - COD with mean length at each age by sexes by Paul M. Hansen

East Greenland

Location		Angmagssalik Fjord 65°49'N, 37°01'W.			Off Skjoldungen 63°09'N, 40°55'W.			Off Skjoldungen 63°09'N, 40°55'W.		
Date		September			8th August			8th August		
Gear		Handline			Longline			Handline		
Year-Class	Age-Group	°/oo	Mean Length ♂♂	Mean Length ♀♀	°/oo	Mean Length ♂♂	Mean Length ♀♀	°/oo	Mean Length ♂♂	Mean Length ♀♀
1954	IV	99	53.3	54.3	-	-	-	7	45.0	-
1953	V	99	59.7	62.7	-	-	-	-	-	-
1952	VI	142	65.3	66.4	6	-	67.0	52	61.4	64.0
1951	VII	163	71.4	73.3	61	69.3	68.1	90	66.4	70.6
1950	VIII	408	77.4	77.4	201	73.2	73.4	515	75.8	74.7
1949	IX	67	80.1	80.9	91	78.8	80.0	201	80.3	80.5
1948	X	4	77.0	-	18	-	74.0	7	82.0	-
1947	XI	7	84.0	86.0	189	78.3	80.4	52	82.5	80.5
1946	XII	-	-	-	24	82.5	85.5	-	-	-
1945	XIII	7	-	105.5	110	88.1	86.5	45	85.8	85.5
1944	XIV	-	-	-	12	91.0	93.0	-	-	-
1943	XV	-	-	-	49	85.3	93.0	7	94.0	-
1942	XVI	4	-	122.0	183	95.1	98.1	22	83.0	86.0
1941	XVII	-	-	-	6	-	100.0	-	-	-
1940	XVIII	-	-	-	12	-	105.0	-	-	-
1939	XIX	-	-	-	6	-	116.0	-	-	-
1938	XX	-	-	-	12	-	119.5	-	-	-
1937	XXI	-	-	-	6	-	134.0	-	-	-
1936	XXII	-	-	-	12	-	105.0	-	-	-
Total °/oo		1000			998			998		
Number of Fish			282			164			134	
Serial Numbers			4			5			6	
Depth (metres)			150			160-200			170	

(cont'd.)

TABLE 21 DENMARK - 1958 (cont'd.) AGE FREQUENCIES - COD with mean length at each age by sexes by Paul M. Hansen

East Greenland

Location		Skjoldungen Bank 63 07°N, 40 52°W.			Anarnitoq 63 10°N, 43 14°W.		
Date		12th August			13th August		
Gear		Longline			Handline		
Year-Class	Age-Group	‰	Mean Length ♂♂	Mean Length ♀♀	‰	Mean Length ♂♂	Mean Length ♀♀
1954	IV	-	-	-	10	-	44.0
1953	V	-	-	-	51	54.0	58.0
1952	VI	-	-	-	101	60.6	64.6
1951	VII	8	70.0	-	111	69.4	66.0
1950	VIII	56	78.4	74.0	505	74.9	72.0
1949	IX	71	84.0	82.2	152	80.4	77.4
1948	X	8	81.0	-	-	-	-
1947	XI	270	76.3	84.3	40	78.0	76.0
1946	XII	16	-	85.5	-	-	-
1945	XIII	111	82.3	94.1	-	-	-
1944	XIV	24	87.5	92.0	-	-	-
1943	XV	63	86.0	93.6	-	-	-
1942	XVI	310	91.1	97.6	30	96.0	100.0
1941	XVII	8	-	97.0	-	-	-
1940	XVIII	16	101.0	103.0	-	-	-
-	-	-	-	-	-	-	-
1936	XXII	32	94.0	99.0	-	-	-
1935	XXIII	-	-	-	-	-	-
1934	XXIV	8	-	109.0	-	-	-
Total ‰		1001			1000		
Number of Fish			126			99	
Serial Numbers			7			8	
Depth (metres)			160-200			150-170	

TABLE 22 DENMARK - 1958 AGE FREQUENCIES - COD by Paul M. Hansen
with mean length at each age by sexes

West Greenland - Research Catches

Location		1B Store Hellefiske Bank 68°03'N, 55°03'W.			1B Store Hellefiske Bank 66°53'N, 54°45'W.			1B Store Hellefiske Bank 66°54'N, 54°07'W.		
Date		29th July			30th July			4th September		
Gear		Handline			Handline			Handline		
Year-Class	Age-Group	°/oo	Mean Length ♂♂	Mean Length ♀♀	°/oo	Mean Length ♂♂	Mean Length ♀♀	°/oo	Mean Length ♂♂	Mean Length ♀♀
1954	IV	122	44.5	46.6	131	47.3	48.8	21	51.0	56.0
1953	V	717	55.3	54.9	581	55.7	56.3	423	61.5	60.4
1952	VI	79	62.4	61.6	72	60.5	64.9	144	71.0	68.7
1951	VII	39	69.3	67.7	68	72.2	70.1	21	72.0	81.0
1950	VIII	31	75.0	76.9	117	74.1	75.8	206	75.6	77.5
1949	IX	-	-	-	5	84.0	-	-	-	-
1948	X	-	-	-	9	79.0	-	41	80.5	84.0
1947	XI	12	81.0	79.0	14	78.0	83.0	124	83.8	84.6
1946	XII	-	-	-	-	-	-	10	-	82.0
1945	XIII	-	-	-	-	-	-	10	-	97.0
1944	XIV	-	-	-	-	-	-	-	-	-
1943	XV	-	-	-	5	90.0	-	-	-	-
Total °/oo		1000			1002			1000		
Number of Fish			254			222			97	
Serial Numbers			1			2			7	
Depth (metres)			51			30-45			50-100	

(cont'd.)

TABLE 22 DENMARK - 1958 (cont'd.) AGE FREQUENCIES - COD with mean length at each age by sexes by Paul M. Hansen

West Greenland - Research Catches

Location		1C Lille Hellefiske Bank 64°58'N, 53°10'W.			1D Fylla Bank 64°08'N, 52°43'W.			1D Fylla Bank 63°55'N, 53°00'W.		
Date		31st July			17th July–1st August			6th May		
Gear		Handline			Handline			Longline		
Year-Class	Age-Group	°/oo	Mean Length ♂♂	Mean Length ♀♀	°/oo	Mean Length ♂♂	Mean Length ♀♀	°/oo	Mean Length ♂♂	Mean Length ♀♀
1954	IV	232	44.1	45.0	11	–	48.0	–	–	–
1953	V	518	55.4	54.5	277	56.8	55.6	139	55.1	60.5
1952	VI	105	63.4	64.4	170	65.9	66.4	139	63.6	63.0
1951	VII	32	69.8	71.0	74	75.7	73.0	139	68.6	72.0
1950	VIII	73	71.8	68.8	234	76.3	75.4	203	69.4	74.9
1949	IX	5	–	78.0	43	74.0	79.0	–	–	–
1948	X	5	–	79.0	11	–	86.0	38	77.0	–
1947	XI	27	–	78.3	149	77.4	79.1	139	77.7	79.3
1946	XII	–	–	–	–	–	–	13	–	85.0
1945	XIII	5	–	94.0	32	80.0	87.0	38	81.0	82.0
–	–	–	–	–	–	–	–	–	–	–
1942	XVI	–	–	–	–	–	–	89	80.5	81.2
1941	XVII	–	–	–	–	–	–	38	85.0	100.5
1940	XVIII	–	–	–	–	–	–	–	–	–
1939	XIX	–	–	–	–	–	–	25	78.0	112.0
Total °/oo		1002			1001			1000		
Number of Fish			220			94			79	
Serial Numbers			3			4			5	
Depth (metres)			36–39			45			180–300	

(cont'd.)

TABLE 22 DENMARK - 1958 (cont'd.) AGE FREQUENCIES - COD with mean length at each age by sexes by Paul M. Hansen

West Greenland - Research Catches

Location		1D Fiskenaes Bank 63°27'N, 52°00'W.			1E Frederikshåb Bank 62°10'N, 50°43'W.		
Date		2nd August			2nd September		
Gear		Handline			Longline		
Year-Class	Age-Group		Mean Length			Mean Length	
		°/oo	♂♂	♀♀	°/oo	♂♂	♀♀
1953	V	101	56.0	59.0	-	-	-
1952	VI	56	64.5	68.7	-	-	-
1951	VII	90	70.2	68.0	13	-	68.0
1950	VIII	303	73.3	75.1	25	71.5	-
1949	IX	67	77.5	73.5	13	-	80.0
1948	X	34	-	78.0	38	-	77.0
1947	XI	326	81.1	80.6	538	74.1	78.9
1946	XII	-	-	-	38	79.0	97.0
1945	XIII	22	97.0	82.0	138	79.8	81.6
1944	XIV	-	-	-	-	-	-
1943	XV	-	-	-	38	78.0	84.5
1942	XVI	-	-	-	150	83.0	90.0
-	-	-	-	-	-	-	-
1938	XX	-	-	-	13	85.0	-
Total °/oo		999			1004		
Number of Fish			89			80	
Serial Numbers			6			8	
Depth (metres)			50-55			75-120	

TABLE 23 DENMARK - 1958 AGE FREQUENCIES - COD by Paul M. Hansen

West Greenland - Inshore and Fjords - Commercial Catches

Location		1A	1B				1C		1D Godthäb Fjord					
Month		July Aug. Sept. Nov.	July	Aug.	Aug. Sept.	Oct.	July	July Aug.	Jan.	Feb.	Feb.	Feb.	Feb.	March
Gear[1]		NK	NK	NK	NK	NK	NK	NK	LL	HL	HL	LL	LL	HL
Year-Class	Age-Group	FREQUENCIES in °/oo												
1955	III	-	-	-	-	-	-	-	-	-	18	-	-	-
1954	IV	8	78	31	13	6	59	28	28	-	79	26	-	-
1953	V	24	533	617	306	116	600	598	14	61	289	26	16	139
1952	VI	41	162	122	156	58	59	168	465	437	500	359	619	452
1951	VII	8	48	56	88	26	67	37	28	38	22	26	48	48
1950	VIII	24	90	82	244	284	89	112	-	160	26	26	32	84
1949	IX	-	-	5	38	39	15	19	42	56	13	77	32	18
1948	X	8	12	10	19	84	-	28	-	9	-	-	16	30
1947	XI	154	54	56	113	297	104	9	85	85	26	51	32	54
1946	XII	41	-	5	-	19	-	-	14	5	-	-	16	12
1945	XIII	106	12	15	6	32	-	-	141	70	9	154	48	72
1944	XIV	49	-	-	-	-	-	-	14	9	-	26	32	12
1943	XV	106	-	-	6	32	7	-	14	42	13	26	-	18
1942	XVI	276	12	-	6	6	-	-	99	14	4	77	79	24
1941	XVII	49	-	-	-	-	-	-	-	-	-	-	16	-
1940	XVIII	73	-	-	6	-	-	-	42	9	-	77	16	24
1939	XIX	8	-	-	-	-	-	-	-	-	-	-	-	6
1938	XX	-	-	-	-	-	-	-	14	5	-	26	-	-
1937	XXI	-	-	-	-	-	-	-	-	-	-	-	-	-
1936	XXII	16	-	-	-	-	-	-	-	-	-	26	-	6
1935	XXIII	-	-	-	-	-	-	-	-	-	-	-	-	-
1934	XXIV	8	-	-	-	-	-	-	-	-	-	-	-	-
Total °/oo		999	1001	999	1001	999	1000	999	1000	1000	999	1003	1002	999
Number of Fish		123	167	196	160	155	135	107	71	213	228	39	63	166
Serial Numbers		9	12	11	10	13	15	14	G9	G1	G6	G8	G10	G2

1) NK - Gear not known; LL - Longline; HL - Handline.

(cont'd.)

TABLE 23 DENMARK - 1958 AGE FREQUENCIES - COD by Paul M. Hansen
(cont'd.)

West Greenland - Inshore and Fjords - Commercial Catches

Location		1D Godthåb Fjord										1F	1D Godthåb Fjord
Month		April	April	April May	May	May	May	July	July	July	July	July	Aug.
Gear[1]		HL	HL	HL	LL	HL	HL	HL	HL	HL	HL	NK	HL
Year-Class	Age-Group	FREQUENCIES in °/oo											
1955	III	-	-	84	-	26	-	76	229	10	-	-	193
1954	IV	-	55	130	-	140	90	227	259	134	15	-	455
1953	V	5	423	595	50	298	707	174	306	507	485	221	80
1952	VI	131	345	130	460	360	143	459	135	244	182	167	193
1951	VII	75	50	15	70	53	45	17	24	25	45	128	11
1950	VIII	141	73	31	130	26	8	17	35	55	182	367	34
1949	IX	116	5	-	90	26	8	6	6	5	15	71	11
1948	X	35	5	-	10	18	-	6	-	-	-	4	11
1947	XI	161	14	-	70	18	-	-	-	15	68	25	-
1946	XII	20	-	-	10	-	-	-	-	-	8	4	-
1945	XIII	171	23	15	90	-	-	6	6	-	-	11	-
1944	XIV	5	-	-	-	-	-	6	-	-	-	-	-
1943	XV	30	-	-	10	9	-	6	-	-	-	-	-
1942	XVI	55	5	-	-	-	-	-	-	5	-	4	11
1941	XVII	5	5	-	-	-	-	-	-	-	-	-	-
1940	XVIII	45	-	-	10	18	-	-	-	-	-	-	-
1939	XIX	-	-	-	-	-	-	-	-	-	-	-	-
1938	XX	5	-	-	-	-	-	-	-	-	-	-	-
1937	XXI	-	-	-	-	9	-	-	-	-	-	-	-
Total °/oo		1000	1003	1000	1000	1001	1001	1000	1000	1000	1000	1002	999
Number of Fish		199	220	131	100	114	133	172	170	201	132	281	88
Serial Numbers		G3	G11	G15	G4	G5	G17	G7	G13	G14	G16	16	G12

[1] HL - Handline; LL - Longline; NK - Gear not known.

TABLE 24 GERMANY - 1958 — AGE FREQUENCIES - COD [1] with mean lengths — by Arno Meyer

OTTER TRAWLERS - Commercial Landings

Subdivision		1D						1F					
Month		March		April		June		Jan./Feb.		May		Dec./Feb.'59	
Year-Class	Age	°/oo	Mean Length	°/oo	Mean Length	°/oo	Mean Length	°/oo	Mean Length	°/oo	Mean Length	°/oo	Mean Length
1953	5	132	57.7	44	-	182	56.8	40	-	36	-	140	56.1
1952	6	71	-	104	63.9	116	63.2	58	-	127	57.4	102	61.6
1951	7	50	-	87	-	124	68.3	104	63.9	218	63.5	123	67.9
1950	8	133	71.1	192	72.1	286	72.6	396	68.5	520	67.4	383	71.8
1949	9	6	-	20	-	23	-	95	72.6	58	-	135	73.3
1948	10	16	-	57	-	54	-	43	-	10	-	11	-
1947	11	208	79.0	165	77.9	175	78.1	194	75.6	27	-	87	74.1
1946	12	26	-	59	-	7	-	14	-	1	-	8	-
1945	13	77	-	50	-	26	-	32	-	-	-	7	-
1944	14	53	-	28	-	4	-	-	-	-	-	4	-
1943	15	56	-	22	-	-	-	3	-	-	-	-	-
1942	16	107	85.6	92	88.1	3	-	17	-	3	-	-	-
1941-	>16	65	-	80	-	-	-	4	-	-	-	-	-
Total °/oo		1000		1000		1000		1000		1000		1000	
Serial Numbers		17		26,29,31		42,43,46,49,50		1,8,12,14,15		38		67,9	

Location		2J		3P south		East Greenland					
						Angmagssalik		Dohrn Bank			
Month		December		February		March		March		August/September	
Year-Class	Age	°/oo	Mean Length	°/oo	Mean Length	°/oo	Mean Length	°/oo	Mean Length	°/oo	Mean Length
1954	4	-	-	7	-	1	-	12	-	3	-
1953	5	32	-	235	51.1	14	-	52	58.3	28	-
1952	6	134	55.1	334	58.0	85	63.9	54	62.9	74	71.3
1951	7	87	-	92	62.1	141	68.8	102	69.8	73	75.6
1950	8	141	60.6	26	-	402	74.1	330	74.4	395	78.8
1949	9	86	-	171	77.0	240	78.1	361	76.9	250	83.3
1948	10	170	65.0	60	-	14	-	22	-	22	-
1947	11	74	-	60	-	46	82.7	18	-	36	-
1946	12	93	-	12	-	7	-	-	-	8	-
1945	13	71	-	2	-	48	84.1	47	89.5	93	97.3
1944	14	17	-	-	-	-	-	2	-	11	-
1943	15	50	-	-	-	-	-	-	-	-	-
1942	16	15	-	-	-	2	-	-	-	7	-
1941-	>16	30	-	1	-	-	-	-	-	-	-
Total °/oo		1000		1000		1000		1000		1000	
Serial Numbers		70		9		19		24		56,62	

1) The age frequencies were calculated from the length frequencies and the age/length keys, which are given in Tables 12 and 29 respectively.

TABLE 25 GERMANY - 1958 AGE FREQUENCIES - COD[1] with mean lengths by Arno Meyer

OTTER TRAWLERS - Research Samples

Subdivision		1B				1D			
Month		August		September		August		September	
Year-Class	Age	°/oo	Mean Length	°/oo	Mean Length	°/oo	Mean Length	°/oo	Mean Length
1956	2	-	-	-	-	127	25.9	-	-
1955	3	10	-	23	-	73	-	-	-
1954	4	48	-	101	47.8	36	-	26	-
1953	5	557	54.6	625	56.7	162	54.7	254	61.6
1952	6	104	61.1	82	64.3	47	-	107	67.3
1951	7	52	-	20	-	39	-	135	73.3
1950	8	102	71.9	59	74.2	122	73.1	188	77.0
1949	9	13	-	-	-	73	-	29	-
1948	10	17	-	20	-	30	-	47	-
1947	11	85	76.3	40	78.7	206	76.9	169	83.1
1946	12	6	-	4	-	30	-	18	-
1945	13	5	-	17	-	32	-	13	-
1944	14	-	-	-	-	4	-	7	-
1943	15	-	-	1	-	4	-	-	-
1942	16	-	-	8	-	8	-	6	-
1941-	>16	1	-	-	-	7	-	-	-
Total °/oo		1000		1000		1000		999	
Serial Numbers		21,26,31		62,66,74		12,13		103	

Subdivision		1F				
Month		August		September		September
Year-Class	Age	°/oo	Mean Length	°/oo	Mean Length	°/oo	Mean Length
1956	2	83	26.0	57	28.1	288	26.1
1955	3	32	-	20	-	39	-
1954	4	12	-	2	-	-	-
1953	5	264	50.1	233	51.9	90	48.8
1952	6	140	57.2	141	58.3	76	57.6
1951	7	94	62.9	83	64.2	44	66.4
1950	8	249	70.4	290	70.8	247	69.5
1949	9	52	-	65	-	92	72.6
1948	10	7	-	3	-	8	-
1947	11	45	72.7	80	70.8	87	72.8
1946	12	-	-	7	-	9	-
1945	13	14	-	4	-	14	-
1944	14	-	-	-	-	6	-
1943	15	-	-	3	-	-	-
1942	16	6	-	11	-	-	-
1941-	>16	2	-	1	-	-	-
Total °/oo		1000		1000		1000	
Serial Numbers		1,3,4		1,4,6		2620	

1) The age frequencies were calculated from the length frequencies and the age/length keys, which are given in Tables 13 and 30 respectively.

TABLE 26 ICELAND - 1958 AGE FREQUENCIES - COD[1] by Jón Jónsson

OTTER TRAWLERS - Exploratory Catches

Subdivision		1C	2H			2J			2J-3K			3K		
Month		August	July			July			September			September		
Sex		2)	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total
Year-Class	Age	FREQUENCIES in °/oo												
1957	1	-	-	-	-	-	9	9	-	-	-	-	-	-
1956	2	-	-	-	-	-	9	9	-	-	-	19	14	33
1955	3	-	-	-	-	9	9	18	80	70	150	38	33	71
1954	4	18	-	-	-	9	9	18	-	50	50	72	77	149
1953	5	241	47	19	66	95	52	147	30	90	120	148	163	311
1952	6	80	75	104	179	103	129	232	100	160	260	67	177	244
1951	7	45	57	142	199	60	121	181	20	60	80	10	43	53
1950	8	125	66	113	179	34	43	77	20	60	80	-	19	19
1949	9	18	38	94	132	9	69	78	10	40	50	5	14	19
1948	10	45	38	38	76	26	26	52	20	20	40	-	5	5
1947	11	125	-	38	38	17	43	60	10	20	30	-	-	-
1946	12	18	19	57	76	-	52	52	-	10	10	-	5	5
1945	13	125	9	19	28	9	17	26	-	-	-	-	-	-
1944	14	-	-	-	-	-	9	9	-	-	-	-	-	-
1943	15	27	-	-	-	-	-	-	-	-	-	-	-	-
1942	16	80	-	-	-	-	9	9	-	-	-	-	-	-
1941	17	-	-	-	-	-	-	-	10	-	10	-	-	-
1940	18	-	-	-	-	-	-	-	10	10	20	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1935	23	9	-	-	-	-	-	-	-	-	-	-	-	-
?	?	45	-	28	28	17	9	26	30	70	100	57	33	90
Total °/oo		1001	349	652	1001	388	615	1003	340	660	1000	416	583	999
Serial Numbers		4			2			1,3			5			6,7
Number of Samples		1			1			2			1			2
Number of Fish		112	37	69	106	45	71	116	34	66	100	87	122	209
Mean Age														
Mean Weight (kg.)														
Total Wt. Landed (Tons)											92			28
Estimated No. (millions)														
Mesh Size (mm.) manilla		110			110			110			110			110
Range of Depths (fm.)		100-140		180-230			168-215				170		156-170	

[1] The length frequencies of these samples are given in Table 14; the age/length keys are given in Table 31.

[2] Data for males and females separately were not available.

TABLE 27 NORWAY - 1958 AGE FREQUENCIES - COD[1] by E. Bratberg B. Rasmussen

BOTTOM LONGLINE - Catches West Greenland

Subdivision		1C			1D		
Month		July			June		
Year-Class	Age	♂♂	♀♀	Total	♂♂	♀♀	Total
		FREQUENCIES in °/oo					
1954	4	-	3	3	1	1	2
1953	5	20	23	43	47	50	97
1952	6	10	30	40	35	40	75
1951	7	47	30	77	48	53	101
1950	8	74	84	158	99	118	217
1949	9	13	23	36	14	24	38
1948	10	50	64	114	32	39	71
1947	11	151	187	338	119	123	242
1946	12	37	20	57	22	22	44
1945	13	13	17	30	21	19	40
1944	14	10	17	27	6	10	16
1943	15	13	3	16	15	9	24
1942	16	13	23	36	8	12	20
1941	17	-	10	10	2	5	7
1940	18	3	3	6	3	3	6
1939	19	-	7	7	1	-	1
Total °/oo		454	544	998	473	528	1001
Number of Fish		136	163	299	498	556	1054
Hook Size				#7			#7
Depth (metres)				120			110-285

1) The length frequencies of these samples are given in Table 15.

TABLE 28 PORTUGAL - 1958 AGE FREQUENCIES - COD [1] by Mario Ruivo
by sexes, with mean length at each age Glicinia V. Quartin

OTTER TRAWLERS - Commercial Catches before Discarding

Subdivision and Month		1C - June						1C - June					
Year-Class	Age	°/oo Frequency ♂♂	♀♀	Tot.	Mean Length ♂♂	♀♀	Tot.	°/oo Frequency ♂♂	♀♀	Tot.	Mean Length ♂♂	♀♀	Tot.
1955	3	2	2	4	41.0	39.0	40.0	-	-	-	-	-	-
1954	4	30	40	70	45.4	46.1	45.8	-	41	41	-	51.3	51.3
1953	5	179	172	351	54.2	55.1	54.7	316	204	520	55.7	55.6	55.7
1952	6	54	48	102	58.6	62.1	60.4	31	102	133	61.7	59.6	60.2
1951	7	52	32	84	68.4	68.4	68.4	30	41	71	60.9	71.5	70.3
1950	8	84	72	156	73.6	74.5	74.1	61	41	102	72.3	68.5	70.4
1949	9	12	4	16	75.4	73.0	74.0	10	51	61	73.0	74.8	73.9
1948	10	18	8	26	73.0	79.8	76.4	21	20	41	77.5	78.0	77.8
1947	11	66	56	122	74.6	76.8	75.7	-	20	20	-	77.5	77.5
1946	12	10	8	18	80.2	74.0	77.1	-	-	-	-	-	-
1945	13	13	9	22	80.8	80.9	80.9	-	-	-	-	-	-
1944	14	16	4	20	82.9	85.5	84.2	-	-	-	-	-	-
1943	15	2	-	2	85.0	-	85.0	10	-	10	82.0	-	82.0
1942	16	2	-	2	84.0	-	84.0	-	-	-	-	-	-
1941	17	2	2	4	86.0	88.0	87.0	-	-	-	-	-	-
Total °/oo		542	457	999				479	520	999			
Serial Numbers		4,5,6,7,8							14				
Number of Samples			5						1				
Number Fish Measured			499						98				
Mean Age													
Mean Weight (Kg.)													
Total Wt. Landed (Tons)													
Estimated No.(millions)													
Mesh Size (mm.)			117						117				
Range of Depths (fm.)													

[1] The length frequencies of these samples are given in Table 16.

(cont'd.)

TABLE 28 PORTUGAL - 1958 (cont'd.) AGE FREQUENCIES - COD[1] by sexes, with mean length at each age by Mario Ruivo Glicinia V. Quartin

OTTER TRAWLERS - Commercial Catches before Discarding

Subdivision and Month		1D - June						2J - September					
Year-Class	Age	°/oo Frequency ♂♂	♀♀	Tot.	Mean Length ♂♂	♀♀	Tot.	°/oo Frequency ♂♂	♀♀	Tot.	Mean Length ♂♂	♀♀	Tot.
1955	3	4	3	7	42.0	37.0	39.5	-	3	3	-	33.0	33.0
1954	4	17	10	27	45.0	46.7	45.9	5	3	8	41.0	40.0	40.5
1953	5	54	53	107	55.4	55.8	55.6	10	3	13	46.5	40.0	43.3
1952	6	44	33	77	62.6	70.5	66.2	38	37	75	51.0	51.0	51.0
1951	7	87	77	164	69.9	69.3	69.6	50	43	93	53.7	54.6	54.2
1950	8	127	158	285	73.1	72.6	72.8	63	55	118	55.0	58.4	56.7
1949	9	30	24	54	73.1	72.1	72.6	53	70	123	56.8	58.5	57.7
1948	10	34	13	47	78.9	75.8	75.9	61	60	121	58.0	60.7	59.4
1947	11	74	111	185	76.3	78.4	77.4	88	80	168	61.2	62.7	62.0
1946	12	3	7	10	74.0	87.0	80.5	50	53	103	60.6	64.9	62.8
1945	13	7	10	17	82.0	81.3	81.7	48	53	101	62.3	66.0	64.2
1944	14	-	-	-	-	-	-	20	28	48	63.1	66.3	64.7
1943	15	-	3	3	-	89.0	89.0	-	8	8	-	65.7	65.7
1942	16	3	4	7	93.0	85.0	89.0	5	10	15	65.5	72.0	68.7
1941	17	-	7	7	-	94.0	94.0	-	3	3	-	79.0	79.0
1940	18	-	3	3	-	81.0	81.0	-	-	-	-	-	-
1939	19	-	-	-	-	-	-	-	3	3	-	79.0	79.0
Total °/oo		484	516	1000				491	512	1003			
Serial Numbers		11,12,13						1,2,4,6					
Number of Samples		3						4					
Number Fish Measured		298						398					
Mean Age													
Mean Weight (Kg.)													
Total Wt. Landed (Tons)													
Estimated No. (millions)													
Mesh Size (mm.)		117						117					
Range of Depths (fm.)													

[1] The length frequencies of these samples are given in Table 16.

(cont'd.)

TABLE 28 PORTUGAL - 1958 (cont'd.) AGE FREQUENCIES - COD [1] by sexes, with mean length at each age

by Mario Ruivo
Glicinia V. Quartin

OTTER TRAWLERS - Commercial Catches before Discarding

Subdivision and Month		2J - October						2J - October					
Year-Class	Age	‰ Frequency ♂♂	♀♀	Tot.	Mean Length ♂♂	♀♀	Tot.	‰ Frequency ♂♂	♀♀	Tot.	Mean Length ♂♂	♀♀	Tot.
1955	3	-	5	5	-	37.0	37.0	15	15	30	36.3	35.7	36.0
1954	4	10	5	15	37.0	37.0	37.0	25	5	30	37.2	39.0	38.1
1953	5	20	5	25	41.5	41.0	41.3	3	17	20	40.0	41.7	40.9
1952	6	15	35	50	47.7	50.9	49.3	25	45	70	52.4	49.8	51.1
1951	7	56	40	96	51.6	56.8	54.2	35	61	96	51.3	53.6	52.5
1950	8	96	75	171	53.6	55.9	54.8	51	40	91	54.9	59.0	57.0
1949	9	50	90	140	56.9	58.5	57.7	45	81	126	57.6	58.8	58.2
1948	10	30	66	96	56.0	59.0	57.5	121	70	191	59.0	61.0	60.0
1947	11	40	86	126	58.5	59.9	59.2	65	61	126	60.3	64.0	62.2
1946	12	50	71	121	60.3	61.7	61.0	65	55	120	62.0	66.0	64.0
1945	13	40	50	90	60.8	62.3	61.6	25	20	45	63.6	64.8	64.2
1944	14	30	25	55	62.8	65.2	64.0	-	30	30	-	65.8	65.8
1943	15	-	10	10	-	71.0	71.0	15	-	15	67.0	-	67.0
1942	16	-	-	-	-	-	-	-	10	10	-	72.5	72.5
Total ‰		437	563	1000				490	510	1000			
Serial Numbers			7,8						9,11				
Number of Samples			2						2				
Number Fish Measured			199						199				
Mean Age													
Mean Weight (Kg.)													
Total Wt. Landed (Tons)													
Estimated No. (millions)													
Mesh Size (mm.)			117						117				
Range of Depths (fm.)													

[1] The length frequencies of these samples are given in Table 16.

(cont'd.)

TABLE 28 PORTUGAL - 1958 (cont'd.) AGE FREQUENCIES - COD[1] by sexes, with mean length at each age by Mario Ruivo Glicinia V. Quartin

OTTER TRAWLERS - Commercial Catches before Discarding

Subdivision and Month		4R - March						4R - April					
Year-Class	Age	°/oo Frequency ♂♂	♀♀	Tot.	Mean Length ♂♂	♀♀	Tot.	°/oo Frequency ♂♂	♀♀	Tot.	Mean Length ♂♂	♀♀	Tot.
1955	3	-	3	3	-	36.0	36.0	4	2	6	38.0	38.0	38.0
1954	4	24	13	37	40.3	43.8	42.1	57	30	87	42.5	43.0	42.8
1953	5	40	64	104	47.1	49.5	48.3	154	82	236	48.6	48.1	48.4
1952	6	84	105	189	47.9	52.5	50.2	103	125	228	50.6	50.3	50.5
1951	7	99	63	162	55.7	55.8	55.8	65	72	137	54.3	57.0	55.7
1950	8	64	61	125	60.1	60.5	60.3	50	53	103	60.3	60.5	60.4
1949	9	39	49	88	62.3	63.9	63.5	42	41	83	59.6	62.0	60.8
1948	10	51	64	115	65.6	68.6	67.1	24	32	56	64.8	66.8	65.8
1947	11	44	47	91	70.6	71.4	71.0	18	16	34	68.2	67.9	68.1
1946	12	-	24	24	-	74.7	74.7	6	6	12	70.0	72.7	71.4
1945	13	10	10	20	70.3	83.7	77.0	4	-	4	80.5	-	80.5
1944	14	14	-	14	72.0	-	72.0	4	2	6	80.0	70.0	75.0
1943	15	3	-	3	70.0	-	70.0	-	2	2	-	90.0	90.0
1942	16	4	3	7	80.0	92.0	86.0	-	2	2	-	87.0	87.0
1941	17	11	3	14	78.7	80.0	79.4	2	2	4	81.0	83.0	82.0
1940	18	-	3	3	-	145.0	145.0	-	-	-	-	-	-
1939	19	-	3	3	-	118.0	118.0	-	-	-	-	-	-
Total °/oo		487	515	1002				533	467	1000			
Serial Numbers		3,5,6,7						9,10,11,12,15,16					
Number of Samples		4						6					
Number Fish Measured		297						496					
Mean Age													
Mean Weight (Kg.)													
Total Wt. Landed (Tons)													
Estimated No. (millions)													
Mesh Size (mm.)		117						117					
Range of Depths (fm.)													

1) The length frequencies of these samples are given in Table 16.

(cont'd.)

TABLE 28 PORTUGAL - 1958 (cont'd.) AGE FREQUENCIES - COD [1] by sexes, with mean length at each age

by Mario Ruivo
Glicinia V. Quartin

OTTER TRAWLERS - Commercial Catches before Discarding

Subdivision and Month		4T - April						4V - March					
Year-Class	Age	°/oo Frequency ♂♂	♀♀	Tot.	Mean Length ♂♂	♀♀	Tot.	°/oo Frequency ♂♂	♀♀	Tot.	Mean Length ♂♂	♀♀	Tot.
1955	3	-	-	-	-	-	-	-	10	10	-	39.0	39.0
1954	4	37	23	60	40.0	43.0	41.5	31	30	61	45.7	42.3	44.0
1953	5	77	114	191	48.9	49.5	49.2	121	101	222	46.8	49.5	48.2
1952	6	94	110	204	52.8	52.4	52.6	101	101	202	54.6	56.6	55.6
1951	7	47	57	104	57.2	57.3	57.2	50	91	141	60.8	63.1	61.9
1950	8	107	80	187	62.2	61.4	61.8	81	50	131	67.0	65.8	66.4
1949	9	54	50	104	62.6	63.8	63.2	30	51	81	70.0	72.0	71.0
1948	10	33	37	70	66.9	67.8	67.4	20	41	61	75.5	78.3	76.9
1947	11	34	13	47	69.8	66.5	68.2	10	20	30	71.0	78.3	74.7
1946	12	10	10	20	71.0	76.7	73.9	-	10	10	-	84.0	84.0
1945	13	4	3	7	71.0	66.0	68.0	10	-	10	71.0	-	71.0
1944	14	-	-	-	-	-	-	-	10	10	-	80.0	80.0
1943	15	3	-	3	68.0	-	68.0	10	-	10	88.0	-	88.0
1942	16	-	-	-	-	-	-	10	10	20	77.0	80.0	78.5
1941	17	-	3	3	-	85.0	85.0	-	-	-	-	-	-
Total °/oo		500	500	1000				474	525	999			
Serial Numbers		14,17,18						1,2					
Number of Samples		3						2					
Number Fish Measured		299						99					
Mean Age													
Mean Weight (Kg.)													
Total Wt. Landed (Tons)													
Estimated No. (millions)													
Mesh Size (mm.)		117						117					
Range of Depths (fm.)													

[1] The length frequencies of these samples are given in Table 16.

(cont'd.)

TABLE 28 PORTUGAL - 1958 (cont'd.)

by Mario Ruivo
Glicinia V. Quartin

AGE FREQUENCIES - COD[1]

by sexes, with mean length at each age

OTTER TRAWLERS - Commercial Catches before Discarding

Subdivision and Month		4V - April					
Year-Class	Age	°/oo Frequency ♂♂	♀♀	Tot.	Mean Length ♂♂	♀♀	Tot.
1954	4	20	20	40	46.5	46.5	46.5
1953	5	81	71	152	49.5	51.3	50.4
1952	6	121	162	283	54.1	52.7	53.4
1951	7	60	61	121	57.3	55.5	56.4
1950	8	91	111	202	61.4	62.7	62.1
1949	9	61	20	81	65.3	67.5	66.4
1948	10	-	51	51	-	73.2	73.2
1947	11	10	30	40	64.0	69.3	66.6
1946	12	20	-	20	69.5	-	69.5
1945	13	-	10	10	-	84.0	84.0
Total °/oo		464	536	1000			
Serial Numbers			19				
Number of Samples			1				
Number Fish Measured			99				
Mean Age							
Mean Weight (Kg.)							
Total Wt. Landed (Tons)							
Estimated No. (millions)							
Mesh Size (mm.)			117				
Range of Depths (fm.)							

1) The length frequencies of this sample are given in Table 16. (cont'd.)

TABLE 28 PORTUGAL - 1958 (cont'd.)

by Mario Ruivo
Glicinia V. Quartin

AGE FREQUENCIES - COD [1]

by sexes, with mean length at each age

DORY VESSELS - Commercial Catches before Discarding

Subdivision and Month		1D - May-June					
Year-Class	Age	°/oo Frequency ♂♂	♀♀	Tot.	Mean Length ♂♂	♀♀	Tot.
1953	5	10	7	17	61.3	61.0	61.2
1952	6	10	17	27	69.0	64.6	66.8
1951	7	27	43	70	70.6	69.4	70.0
1950	8	80	153	233	71.5	74.1	72.8
1949	9	30	30	60	74.2	74.4	74.3
1948	10	30	67	97	73.1	77.5	75.3
1947	11	83	260	343	74.6	77.9	76.3
1946	12	17	40	57	75.0	81.7	78.4
1945	13	20	13	33	81.3	83.0	82.2
1944	14	3	14	17	82.0	80.5	81.3
1943	15	10	20	30	80.3	81.0	80.7
1942	16	7	10	17	77.0	85.0	81.0
Total °/oo		327	674	1001			
Serial Numbers		1,2,3					
Number of Samples		3					
Number Fish Measured		300					
Mean Age							
Mean Weight (Kg.)							
Total Wt. Landed (Tons)							
Estimated No. (millions)							
Hook Size		#14½					
Range of Depths (fm.)							

[1] The length frequencies of these samples are given in Table 16.

TABLE 29 GERMANY - 1958 AGE/LENGTH KEY - COD[1)2)] by Arno Meyer

OTTER TRAWLER - Commercial Landings 1D March Serial No. 17

Year-Class	?	1953	1952	1951	1950	1949	1948	1947	1946	1945	1944	1943	1942		Total
Age	?	5	6	7	8	9	10	11	12	13	14	15	16	>16	
3-cm. group	ACTUAL NUMBERS OF OTOLITHS READ														
45-47	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1
48-50	-	4	-	-	-	-	-	-	-	-	-	-	-	-	4
51-53	-	5	-	-	-	-	-	-	-	-	-	-	-	-	5
54-56	-	7	-	-	-	-	-	-	-	-	-	-	-	-	7
57-59	-	10	6	-	-	-	-	-	-	-	-	-	-	-	16
60-62	-	14	5	2	-	-	-	-	-	-	-	-	-	-	21
63-65	1	2	6	3	5	-	1	-	-	-	-	-	-	-	18
66-68	2	-	3	4	8	-	-	-	-	-	-	-	-	-	17
69-71	-	-	-	2	4	1	1	1	-	-	-	-	-	-	9
72-74	1	-	-	-	2	-	1	6	-	2	-	1	-	-	13
75-77	1	-	-	-	2	-	-	5	1	2	-	-	1	-	12
78-80	1	-	-	-	1	-	-	8	1	2	1	2	3	1	20
81-83	1	-	-	-	-	-	-	5	1	2	1	1	3	-	14
84-86	-	-	-	-	1	-	-	2	-	1	2	1	3	2	12
87-89	-	-	-	-	-	-	-	1	-	-	1	3	-	2	7
90-92	1	-	-	-	-	-	-	-	-	-	1	1	2	1	6
93-95	1	-	-	-	-	-	-	-	-	1	-	-	1	2	5
96-98	1	-	-	-	-	-	-	-	-	-	1	-	-	2	4
99-101	-	-	-	-	-	-	-	-	-	-	1	-	-	2	3
102-104	1	-	-	-	-	-	-	-	-	-	1	-	1	2	5
105-107	-	-	-	-	-	-	-	-	-	-	-	-	2	-	2
108-110	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
123-125	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2
126-128	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
129-131	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2
Total	11	43	20	11	23	1	3	28	3	11	9	9	18	16	206

1) Measurements made of total length. (cont'd.)

2) The length frequencies of this sample are given in Table 12; the age frequencies are given in Table 24.

TABLE 29 GERMANY - 1958 AGE/LENGTH KEY - COD[1)2)] by Arno Meyer
(cont'd.)

OTTER TRAWLERS - Commercial Landings 1D April Serial Nos. 26, 29

Year-Class	?	1953	1952	1951	1950	1949	1948	1947	1946	1945	1944	1943	1942		Total
Age	?	5	6	7	8	9	10	11	12	13	14	15	16	>16	
3-cm. group	ACTUAL NUMBERS OF OTOLITHS READ														
48-50	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1
51-53	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1
54-56	-	12	3	3	-	-	-	-	-	-	-	-	-	-	18
57-59	1	8	4	1	-	-	-	-	-	-	-	-	-	-	14
60-62	1	6	13	4	1	-	-	-	-	-	-	-	-	-	25
63-65	2	-	8	3	2	-	1	-	-	-	-	-	-	-	16
66-68	4	-	3	5	8	-	-	-	-	-	-	-	-	-	20
69-71	1	-	2	7	11	-	-	5	1	-	-	-	-	-	27
72-74	4	-	-	1	17	2	3	7	-	1	-	-	-	-	35
75-77	4	-	-	1	3	1	3	11	5	2	-	1	1	-	32
78-80	2	-	-	-	6	1	3	10	3	1	1	-	2	-	29
81-83	2	-	-	-	1	-	4	11	3	5	2	1	5	1	35
84-86	-	-	-	-	-	1	1	1	2	4	3	2	7	3	24
87-89	-	-	-	-	-	1	2	1	1	-	2	1	6	6	20
90-92	1	-	-	-	-	-	-	1	1	3	-	2	6	4	18
93-95	1	-	-	-	-	-	-	-	1	-	-	-	2	4	8
96-98	1	-	-	-	-	-	-	-	1	-	1	-	1	4	8
99-101	1	-	-	-	-	-	-	-	-	-	-	-	1	2	4
102-104	-	-	-	-	-	-	-	-	-	-	-	-	2	3	5
105-107	2	-	-	-	-	-	-	-	-	-	-	1	-	1	4
108-110	1	-	-	-	-	-	-	-	-	-	1	-	-	1	3
111-113	1	-	-	-	-	-	-	-	-	-	-	-	1	1	3
114-116	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
117-119	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
120-122	-	-	-	-	-	-	-	-	-	-	-	-	-	4	4
125	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
130	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
133	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
Total	29	28	33	25	49	6	17	47	18	16	10	8	34	38	358

1) Measurements made of total length. (cont'd.)

2) The length frequencies of these samples are given in Table 12; the age frequencies are given in Table 24.

TABLE 29 GERMANY - 1958 AGE/LENGTH KEY - COD[1)2)] by Arno Meyer
(cont'd.)

OTTER TRAWLER - Commercial Landings 1D June Serial Nos. 43, 46, 50

Year-Class	?	1953	1952	1951	1950	1949	1948	1947	1946	1945	1944	1943	1942		Total
Age	?	5	6	7	8	9	10	11	12	13	14	15	16	>16	
3-cm. group	ACTUAL NUMBERS OF OTOLITHS READ														
45-47	1	6	-	-	-	-	-	-	-	-	-	-	-	-	7
48-50	1	9	-	-	-	-	-	-	-	-	-	-	-	-	10
51-53	3	18	1	-	-	-	-	-	-	-	-	-	-	-	22
54-56	2	38	1	2	-	-	-	-	-	-	-	-	-	-	43
57-59	1	32	12	1	-	-	-	-	-	-	-	-	-	-	46
60-62	1	14	13	7	2	-	1	-	-	-	-	-	-	-	38
63-65	1	2	12	6	5	-	1	-	-	-	-	-	-	-	27
66-68	1	-	10	9	15	-	1	-	-	-	-	-	-	-	36
69-71	1	-	1	13	26	1	2	4	-	-	-	-	-	-	48
72-74	1	-	-	9	29	1	3	13	2	-	-	-	-	-	58
75-77	1	-	-	1	18	2	3	22	-	2	-	-	-	-	49
78-80	2	-	-	-	8	2	10	15	-	6	1	-	-	-	44
81-83	3	-	-	1	10	4	5	22	1	4	-	-	-	-	50
84-86	3	-	-	-	3	3	2	20	-	3	3	-	-	-	37
87-89	4	-	-	-	2	2	1	7	3	4	1	-	3	-	27
90-92	2	-	-	-	-	2	-	8	2	1	-	1	2	1	19
93-95	1	-	-	-	-	-	1	2	1	-	1	-	4	1	11
96-98	2	-	-	-	-	-	-	3	-	1	1	-	1	1	9
99-101	-	-	-	-	-	1	-	2	1	1	-	-	-	-	5
102-104	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2
106	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
108	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
111	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1
118	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1
120	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
148	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
Total	31	119	50	49	118	18	30	119	10	22	7	1	12	8	594

1) Measurements made of total length. (cont'd.)

2) The length frequencies of these samples are given in Table 12; the age frequencies are given in Table 24.

TABLE 29 GERMANY - 1958 AGE/LENGTH KEY - COD[1)2)] by Arno Meyer
(cont'd.)

OTTER TRAWLERS - Commercial Landings 1F January-February Serial Nos. 1, 8, 12, 14, 15

Year-Class	?	1953	1952	1951	1950	1949	1948	1947	1946	1945	1944	1943	1942		Total
Age	?	5	6	7	8	9	10	11	12	13	14	15	16	>16	
3-cm. group	ACTUAL NUMBERS OF OTOLITHS READ														
42-44	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1
45-47	-	12	-	-	-	-	-	-	-	-	-	-	-	-	12
48-50	2	22	6	2	-	-	-	-	-	-	-	-	-	-	32
51-53	2	20	12	6	-	-	-	-	-	-	-	-	-	-	40
54-56	1	5	22	10	8	-	-	-	-	-	-	-	-	-	46
57-59	1	1	24	22	26	-	-	1	-	-	-	-	-	-	75
60-62	3	-	3	21	42	5	2	2	-	-	-	-	-	-	78
63-65	4	-	6	15	51	9	2	4	-	-	-	-	-	-	91
66-68	7	-	1	14	75	8	3	6	1	-	-	-	-	-	115
69-71	5	-	1	7	54	16	5	14	-	1	-	-	-	-	103
72-74	5	-	-	6	32	7	5	28	3	4	-	-	-	-	90
75-77	4	-	-	1	22	11	5	44	2	1	-	1	4	-	95
78-80	4	-	-	-	15	11	9	36	3	9	-	1	4	1	93
81-83	5	-	-	-	10	10	4	26	2	12	1	-	6	3	79
84-86	4	-	-	-	-	10	7	17	6	13	1	2	9	6	75
87-89	3	-	-	-	-	8	2	11	3	17	-	4	6	1	55
90-92	3	-	-	-	-	4	3	8	3	8	1	-	5	1	36
93-95	2	-	-	-	-	-	-	2	-	3	-	2	3	3	15
96-98	-	-	-	-	-	-	-	-	-	1	-	-	1	1	3
99-101	-	-	-	-	-	-	-	1	-	-	-	-	2	2	5
102-104	-	-	-	-	-	-	-	-	-	2	-	-	1	-	3
105-107	-	-	-	-	-	-	-	-	-	1	-	-	-	1	2
108-110	-	-	-	-	-	-	-	-	-	3	-	-	-	-	3
111-113	1	-	-	-	-	-	-	-	-	2	-	-	-	1	4
116	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1
122	1	-	-	-	-	-	-	-	-	-	-	-	-	1	2
130	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
133	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
135	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1
Total	57	61	75	104	335	99	47	200	23	77	3	10	43	23	1157

1) Measurements made of total length. (cont'd.)

2) The length frequencies of these samples are given in Table 12; the age frequencies are given in Table 24.

TABLE 29 GERMANY - 1958 (cont'd.) AGE/LENGTH KEY - COD[1)2)] by Arno Meyer

OTTER TRAWLER - Commercial Landings 1F May Serial No. 38

Year-Class	?	1953	1952	1951	1950	1949	1948	1947	1946	1945	1944	1943	1942		Total
Age	?	5	6	7	8	9	10	11	12	13	14	15	16	>16	
3-cm. group	ACTUAL NUMBERS OF OTOLITHS READ														
45-47	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1
48-50	-	2	-	-	-	-	-	-	-	-	-	-	-	-	2
51-53	-	5	3	-	-	-	-	-	-	-	-	-	-	-	8
54-56	1	-	10	5	1	-	-	-	-	-	-	-	-	-	17
57-59	4	2	10	7	4	-	-	-	-	-	-	-	-	-	27
60-62	-	-	3	10	11	1	-	-	-	-	-	-	-	-	25
63-65	1	1	-	4	12	2	-	-	-	-	-	-	-	-	20
66-68	1	-	-	2	10	1	-	-	-	-	-	-	-	-	14
69-71	-	-	-	2	10	1	-	-	-	-	-	-	-	-	13
72-74	1	-	-	1	4	-	-	-	-	-	-	-	-	-	6
75-77	-	-	-	-	1	1	1	2	-	-	-	-	-	-	5
78-80	-	-	-	-	-	-	1	3	-	-	-	-	1	-	5
81-83	-	-	-	-	1	2	-	3	-	-	-	-	-	-	6
84-86	2	-	-	-	1	1	-	2	1	-	1	-	1	-	9
87-89	1	-	-	-	1	-	-	1	1	1	-	-	-	-	5
90-92	-	-	-	-	-	-	-	1	-	-	-	-	1	-	2
95	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1
103	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1
128	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
Total	12	11	26	31	56	9	2	13	2	1	1	-	3	1	168

1) Measurements made of total length. (cont'd.)

2) The length frequencies of this sample are given in Table 12; the age frequencies are given in Table 24.

TABLE 29 GERMANY - 1958/59 AGE/LENGTH KEY - COD[1)2)] by Arno Meyer
(cont'd.)
OTTER TRAWLERS - Commercial Landings 1F Dec. 1958-Feb. 1959 Serial Nos. 67, 9/59

Year-Class	?	1953	1952	1951	1950	1949	1948	1947	1946	1945	1944	1943	1942		Total
Age	?	5	6	7	8	9	10	11	12	13	14	15	16	>16	
3-cm. group	ACTUAL NUMBERS OF OTOLITHS READ														
45-47	-	2	-	-	-	-	-	-	-	-	-	-	-	-	2
48-50	-	8	-	-	-	-	-	-	-	-	-	-	-	-	8
51-53	1	17	5	-	-	-	-	-	-	-	-	-	-	-	23
54-56	1	28	8	1	-	-	-	-	-	-	-	-	-	-	38
57-59	2	14	9	1	-	-	-	-	-	-	-	-	-	-	26
60-62	1	2	5	3	4	1	-	-	-	-	-	-	-	-	16
63-65	-	-	10	7	8	2	1	3	-	1	-	-	-	-	32
66-68	1	3	2	11	20	4	1	1	-	-	-	-	-	-	43
69-71	1	-	2	5	17	5	-	7	-	-	-	-	-	-	37
72-74	4	-	-	5	21	12	-	3	1	1	1	-	-	-	48
75-77	2	-	-	-	17	4	1	3	1	-	-	-	-	-	28
78-80	-	-	-	-	9	5	-	2	-	-	-	-	-	-	16
81-83	1	-	-	1	5	4	-	5	-	-	-	-	-	-	16
84-86	1	-	-	-	5	1	-	4	-	2	-	-	1	-	14
87-89	2	-	-	-	2	2	-	2	1	1	-	-	1	-	11
90-92	1	-	-	-	-	2	-	3	-	-	-	1	-	-	7
93-95	-	-	-	-	-	-	-	2	-	-	-	-	-	-	2
99	1	-	-	-	-	-	-	-	-	1	-	-	-	-	2
116	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1
120	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
Total	19	74	41	34	108	42	3	35	3	7	1	1	2	1	371

1) Measurements made of total length. (cont'd.)

2) The length frequencies of these samples are given in Table 12; the age frequencies are given in Table 24.

TABLE 29 GERMANY - 1958 AGE/LENGTH KEY - COD[1)2)] by Arno Meyer
(cont'd.)

OTTER TRAWLER - Commercial Landing 2J December Serial No. 70

Year-Class	?	1953	1952	1951	1950	1949	1948	1947	1946	1945	1944	1943		Total
Age	?	5	6	7	8	9	10	11	12	13	14	15	>15	
3-cm.group	ACTUAL NUMBERS OF OTOLITHS READ													
42-44	-	1	-	-	-	-	-	-	-	-	-	-	-	1
45-47	-	-	2	-	-	-	-	-	-	-	-	-	-	2
48-50	1	-	2	-	-	-	-	-	-	-	-	-	-	3
51-53	2	3	3	-	1	-	-	-	-	-	-	-	-	9
54-56	6	-	3	4	1	1	2	-	-	-	-	-	-	17
57-59	3	-	5	2	5	-	2	1	-	-	-	-	-	18
60-62	7	-	-	2	6	2	4	1	2	-	-	2	-	26
63-65	7	-	1	1	2	4	3	2	3	3	-	1	-	27
66-68	12	-	-	-	2	1	4	1	2	4	-	1	1	28
69-71	6	-	-	-	-	1	2	3	2	2	2	-	-	18
72-74	3	-	-	-	-	1	1	2	3	-	1	2	3	16
75-77	4	-	-	-	-	-	3	-	-	-	-	1	2	10
78-80	2	-	-	-	-	-	1	-	2	-	-	-	2	7
81-83	-	-	-	-	-	-	-	-	-	-	-	-	-	-
84-86	1	-	-	-	-	1	-	1	-	-	-	-	2	5
87-89	-	-	-	-	-	-	-	-	-	-	-	-	-	-
90-92	-	-	-	-	-	-	-	-	-	-	-	1	-	1
93-95	-	-	-	-	-	-	-	-	-	-	-	-	-	-
96-98	2	-	-	-	-	-	-	-	-	-	-	-	-	2
99-101	-	-	-	-	-	-	-	1	-	-	-	-	-	1
>101	-	-	-	-	-	-	-	-	-	-	-	-	1	1
Total	56	4	16	9	17	11	22	12	14	9	3	8	11	192

1) Measurements made of total length. (cont'd.)

2) The length frequencies of this sample are given in Table 12; the age frequencies are given in Table 24.

TABLE 29 GERMANY - 1958 AGE/LENGTH KEY - COD[1)2)] by Arno Meyer
(cont'd.)

OTTER TRAWLER - Commercial Landings 3P south February Serial No. 9

Year-Class	?	1954	1953	1952	1951	1950	1949	1948	1947	1946	1945	1944	1943	1942		Total
Age	?	4	5	6	7	8	9	10	11	12	13	14	15	16	>16	
3-cm. group	ACTUAL NUMBERS OF OTOLITHS READ															
42-44	1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	4
45-47	1	-	4	1	-	-	-	-	-	-	-	-	-	-	-	6
48-50	1	-	9	5	1	-	-	-	-	-	-	-	-	-	-	16
51-53	-	-	7	4	-	-	-	-	-	-	-	-	-	-	-	11
54-56	2	-	5	11	4	-	-	-	-	-	-	-	-	-	-	22
57-59	4	-	1	10	1	-	-	-	-	-	-	-	-	-	-	16
60-62	2	-	1	5	2	-	-	-	-	-	-	-	-	-	-	10
63-65	1	-	-	9	6	1	1	1	-	-	-	-	-	-	-	19
66-68	3	-	-	4	-	3	2	3	-	-	-	-	-	-	-	15
69-71	4	-	-	1	1	-	5	1	1	-	-	-	-	-	-	13
72-74	3	-	-	1	2	-	4	2	-	-	-	-	-	-	-	12
75-77	3	-	-	-	-	1	9	1	1	1	-	-	-	-	-	16
78-80	3	-	-	1	-	-	6	1	6	-	-	-	-	-	-	17
81-83	5	-	-	-	1	1	8	3	2	-	-	-	-	-	-	20
84-86	4	-	-	-	-	-	6	1	3	-	-	-	-	-	-	14
87-89	1	-	-	-	-	-	3	2	-	2	-	-	-	-	-	8
90-92	2	-	-	-	-	-	1	-	4	1	2	-	-	-	1	11
93-95	-	-	-	-	-	-	-	-	1	2	-	-	-	-	-	3
96-98	-	-	-	-	-	-	-	-	2	1	-	-	-	-	-	3
99-101	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-	2
103	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1
114	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1
Total	41	1	29	52	18	6	45	15	20	9	2	-	1	-	1	240

1) Measurements made of total length. (cont'd.)

2) The length frequencies of this sample are given in Table 12; the age frequencies are given in Table 24.

TABLE 29 GERMANY - 1958 AGE/LENGTH KEY - COD[1)2)] by Arno Meyer
(cont'd.)

OTTER TRAWLER - Commercial Landings East Greenland - Angmagssalik March Serial No. 19

Year-Class	?	1954	1953	1952	1951	1950	1949	1948	1947	1946	1945	1944	1943	1942	Total
Age	?	4	5	6	7	8	9	10	11	12	13	14	15	16	
3-cm. group	ACTUAL NUMBERS OF OTOLITHS READ														
54-56	1	1	5	-	-	-	-	-	-	-	-	-	-	-	7
57-59	2	-	5	4	1	-	-	-	-	-	-	-	-	-	12
60-62	3	-	-	8	2	6	-	-	-	-	-	-	-	-	19
63-65	3	-	-	5	8	1	1	-	-	-	-	-	-	-	18
66-68	3	-	-	4	4	9	2	-	-	1	-	-	-	-	23
69-71	1	-	-	-	5	9	1	-	-	-	-	-	-	-	16
72-74	1	-	-	-	2	16	7	-	1	-	1	-	-	-	28
75-77	1	-	-	-	-	10	12	2	1	-	-	-	-	-	26
78-80	2	-	-	-	2	6	9	-	1	-	2	-	-	-	22
81-83	3	-	-	-	-	11	6	-	3	-	1	-	-	-	24
84-86	3	-	-	-	-	5	7	-	3	-	1	-	-	-	19
87-89	4	-	-	-	-	2	2	-	2	-	8	-	-	-	18
90-92	2	-	-	-	-	4	8	1	-	-	1	-	-	1	17
93-95	3	-	-	-	-	-	3	3	4	-	1	-	-	1	15
96-98	3	-	-	-	-	1	1	-	2	-	3	-	-	-	10
99-101	1	-	-	-	-	-	1	1	1	-	1	-	-	-	5
105	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1
108	-	-	-	-	-	-	1	-	-	-	1	-	-	-	2
Total	36	1	10	21	24	80	62	7	18	1	20	-	-	2	282

1) Measurements made of total length. (cont'd.)

2) The length frequencies of this sample are given in Table 12; the age frequencies are given in Table 24.

TABLE 29 GERMANY - 1958 AGE/LENGTH KEY - COD[1)2)] by Arno Meyer
(cont'd.)

OTTER TRAWLER - Commercial Landings East Greenland - Dohrnbank March Serial No. 24

Year-Class	?	1955	1954	1953	1952	1951	1950	1949	1948	1947	1946	1945	1944	Total
Age	?	3	4	5	6	7	8	9	10	11	12	13	14	
3-cm.group	ACTUAL NUMBERS OF OTOLITHS READ													
45-47	1	2	1	-	-	-	-	-	-	-	-	-	-	4
48-50	1	-	4	-	-	-	-	-	-	-	-	-	-	5
51-53	2	-	-	8	2	-	-	-	-	-	-	-	-	12
54-56	-	-	-	5	1	-	-	-	-	-	-	-	-	6
57-59	-	-	-	4	3	-	1	-	-	-	-	-	-	8
60-62	1	-	-	3	2	2	1	-	-	-	-	-	-	9
63-65	1	-	-	1	3	3	3	-	-	-	-	-	-	11
66-68	1	-	-	-	-	1	3	7	1	-	-	-	-	13
69-71	1	-	-	-	1	2	11	5	-	-	-	-	-	20
72-74	1	-	-	-	-	3	5	7	-	-	-	-	-	16
75-77	1	-	-	-	-	1	8	10	-	1	-	-	-	21
78-80	-	-	-	-	-	1	9	5	1	-	-	1	-	17
81-83	1	-	-	-	-	-	3	9	1	1	-	1	-	16
84-86	1	-	-	-	-	-	2	6	-	1	-	3	-	13
87-89	1	-	-	-	-	-	2	4	-	1	-	4	-	12
90-92	1	-	-	-	-	-	3	4	1	-	-	-	-	9
93-95	1	-	-	-	-	-	-	2	1	-	-	2	1	7
96-98	1	-	-	-	-	-	-	1	-	-	-	1	-	3
99	-	-	-	-	-	-	1	-	-	-	-	-	-	1
104	1	-	-	-	-	-	-	-	-	-	-	1	-	2
115	-	-	-	-	-	-	-	-	-	-	-	1	-	1
Total	17	2	5	21	12	13	52	60	5	4	-	14	1	206

1) Measurements made of total length. (cont'd.)

2) The length frequencies of this sample are given in Table 12; the age frequencies are given in Table 24.

TABLE 29 GERMANY - 1958 AGE/LENGTH KEY - COD[1)2)] by Arno Meyer
(cont'd.)

OTTER TRAWLER - Commercial Landings East Greenland-Dohrnbank Aug.-Sept. Serial No. 56,62

Year-Class	?	1954	1953	1952	1951	1950	1949	1948	1947	1946	1945	1944	1943	1942	Total
Age	?	4	5	6	7	8	9	10	11	12	13	14	15	16	
3-cm. group	ACTUAL NUMBERS OF OTOLITHS READ														
53	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1
57-59	-	1	1	-	-	-	-	-	-	-	-	-	-	-	2
60-62	1	1	4	1	-	-	1	-	-	-	-	-	-	-	8
63-65	1	-	1	2	-	2	-	-	-	-	-	-	-	-	6
66-68	4	-	4	2	3	6	-	-	1	-	-	-	-	-	20
69-71	7	-	1	6	5	12	2	-	1	-	-	-	-	-	34
72-74	5	-	-	10	1	16	10	-	-	-	-	-	-	-	42
75-77	9	-	-	4	10	16	8	-	-	-	-	-	-	-	47
78-80	5	-	-	-	3	31	8	-	2	-	-	-	-	-	49
81-83	9	-	-	-	-	19	17	-	1	-	-	1	-	-	47
84-86	9	-	-	-	1	13	10	3	-	-	1	-	-	-	37
87-89	3	-	-	-	1	9	14	3	3	2	-	-	-	-	35
90-92	5	-	-	-	-	1	7	-	2	-	5	1	-	-	21
93-95	1	-	-	-	-	2	1	1	2	1	4	-	-	1	13
96-98	3	-	-	-	-	-	1	-	-	-	3	-	-	-	7
99-101	2	-	-	-	-	-	-	-	-	-	1	-	-	-	3
102-104	-	-	-	-	-	-	1	-	-	-	5	-	-	1	7
105-107	1	-	-	-	-	-	-	-	-	-	3	-	-	1	5
117	1	-	-	-	-	-	-	-	-	-	-	1	-	-	2
Total	66	3	11	25	24	127	80	7	12	3	22	3	-	3	386

1) Measurements made of total length.

2) The length frequencies of these samples are given in Table 12; the age frequencies are given in Table 24.

TABLE 30 GERMANY - 1958 AGE/LENGTH KEY - COD[1)2)] by Arno Meyer

OTTER TRAWLER "Everling" - Research Samples 1B August Stations 21, 26, 31

Year-Class	?	1955	1954	1953	1952	1951	1950	1949	1948	1947	1946	1945		Total
Age	?	3	4	5	6	7	8	9	10	11	12	13	>16	
3-cm.group	ACTUAL NUMBERS OF OTOLITHS READ													
33-35	-	1	-	-	-	-	-	-	-	-	-	-	-	1
36-38	-	2	-	-	-	-	-	-	-	-	-	-	-	2
39-41	1	4	4	-	-	-	-	-	-	-	-	-	-	9
42-44	2	-	7	6	-	-	-	-	-	-	-	-	-	15
45-47	-	-	7	28	1	-	-	-	-	-	-	-	-	36
48-50	1	-	6	45	-	-	-	-	-	-	-	-	-	52
51-53	6	-	4	74	3	1	-	-	-	-	-	-	-	88
54-56	3	-	1	76	7	-	-	-	-	-	-	-	-	87
57-59	4	-	-	74	7	2	-	-	-	-	-	-	-	87
60-62	4	-	-	43	20	2	4	-	-	1	-	-	-	74
63-65	7	-	-	18	11	3	2	2	-	1	-	-	-	44
66-68	-	-	-	3	18	7	2	-	1	-	-	-	-	31
69-71	1	-	-	-	3	10	22	-	1	7	-	-	-	44
72-74	5	-	-	-	-	5	23	1	3	8	1	1	-	47
75-77	-	-	-	-	-	4	10	-	4	14	-	1	-	33
78-80	4	-	-	-	-	1	5	2	2	13	-	1	-	28
81-83	-	-	-	-	-	-	-	3	-	7	2	-	-	12
84-86	-	-	-	-	-	-	-	-	-	4	-	-	1	5
87-89	-	-	-	-	-	-	-	-	-	-	-	-	-	-
90-92	-	-	-	-	-	-	-	-	-	2	-	-	-	2
Total	38	7	29	367	70	35	68	8	11	57	3	3	1	697

1) Measurements made of total length. (cont'd.)

2) The length frequencies of these samples are given in Table 13; the age frequencies are given in Table 25.

TABLE 30 GERMANY - 1958 AGE/LENGTH KEY - COD[1)2)] by Arno Meyer
(cont'd.)

OTTER TRAWLER "Saarbrücken" - Research Samples 1B September Stations 62, 66, 74

Year-Class	?	1955	1954	1953	1952	1951	1950	1949	1948	1947	1946	1945	1944	1943	1942	Total
Age	?	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
3-cm. group	ACTUAL NUMBERS OF OTOLITHS READ															
42-44	-	1	1	1	-	-	-	-	-	-	-	-	-	-	-	3
45-47	-	-	2	1	-	-	-	-	-	-	-	-	-	-	-	3
48-50	1	-	2	7	-	-	-	-	-	-	-	-	-	-	-	10
51-53	1	-	4	10	2	-	-	-	-	-	-	-	-	-	-	17
54-56	1	-	-	23	-	-	-	-	-	-	-	-	-	-	-	24
57-59	1	-	-	55	2	-	-	-	-	-	-	-	-	-	-	58
60-62	2	-	1	34	4	-	1	-	-	-	-	-	-	-	-	42
63-65	2	-	-	25	4	1	-	-	-	-	-	-	-	-	-	32
66-68	-	-	-	10	6	3	1	-	-	-	-	-	-	-	-	20
69-71	-	-	-	-	4	-	2	-	1	1	-	-	-	-	-	8
72-74	-	-	-	-	5	2	8	-	1	3	1	-	-	-	-	20
75-77	-	-	-	-	-	1	7	-	1	3	-	1	-	-	-	13
78-80	-	-	-	-	-	3	6	-	4	6	-	2	-	-	-	21
81-83	-	-	-	-	-	-	1	-	2	2	-	2	-	-	-	7
84-86	-	-	-	-	-	-	1	-	-	2	1	2	-	-	1	7
87-89	-	-	-	-	-	-	-	-	-	-	1	3	-	-	2	6
90-92	-	-	-	-	-	-	-	-	1	1	-	-	-	-	1	3
93-95	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	2
96-98	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
Total	8	1	10	166	27	10	27	-	10	19	3	10	-	1	5	297

1) Measurements made of total length. (cont'd.)

2) The length frequencies of these samples are given in Table 13; the age frequencies are given in Table 25.

TABLE 30 GERMANY - 1958 AGE/LENGTH KEY - COD[1)2)] by Arno Meyer
(cont'd.)

OTTER TRAWLER "Everling" - Research Sample 1D August Stations 12, 13

Year-Class	?	1956	'55	'54	'53	'52	'51	'50	'49	'48	'47	'46	'45	'44	'43	'42		Total
Age	?	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	>16	
3-cm. group	ACTUAL NUMBERS OF OTOLITHS READ																	
21-23	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
24-26	-	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16
27-29	-	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
30-32	-	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
33-35	-	1	5	2	-	-	-	-	-	-	-	-	-	-	-	-	-	8
36-38	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8
39-41	2	-	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-	6
42-44	1	-	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	4
45-47	-	-	-	4	1	-	-	-	-	-	-	-	-	-	-	-	-	5
48-50	-	-	-	1	2	-	-	-	-	-	-	-	-	-	-	-	-	3
51-53	1	-	-	-	12	-	-	-	-	-	-	-	-	-	-	-	-	13
54-56	-	-	-	-	12	-	-	-	-	-	-	-	-	-	-	-	-	12
57-59	-	-	-	-	9	1	1	-	-	-	-	-	-	-	-	-	-	11
60-62	-	-	-	-	4	4	1	-	-	-	-	-	-	-	-	-	-	9
63-65	1	-	-	-	2	2	2	-	-	-	-	-	-	-	-	-	-	7
66-68	-	-	-	-	-	4	1	5	-	1	1	1	1	-	-	-	-	14
69-71	-	-	-	-	-	-	2	8	3	3	7	2	-	-	-	-	-	25
72-74	-	-	-	-	-	2	1	8	4	2	10	3	1	-	-	-	-	31
75-77	3	-	-	-	-	-	2	9	5	-	13	1	1	-	-	-	-	34
78-80	2	-	-	-	-	-	-	2	3	1	11	1	1	1	1	1	1	25
81-83	1	-	-	-	-	-	-	1	2	1	7	-	3	-	-	-	-	15
84-86	-	-	-	-	-	-	-	-	1	-	4	-	1	-	-	-	-	6
87-89	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1
90-92	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1
93-95	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1
>114	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
Total	11	35	19	9	43	13	10	33	19	8	54	8	8	1	1	2	2	276

1) Measurement made of total length. (cont'd.)

2) The length frequencies of these samples are given in Table 13; the age frequencies are given in Table 25.

TABLE 30 GERMANY - 1958 AGE/LENGTH KEY - COD[1)2)] by Arno Meyer
(cont'd.)

OTTER TRAWLER "Saarbrücken" - Research Sample 1D September Station 103

Year-Class	?	1954	1953	1952	1951	1950	1949	1948	1947	1946	1945	1944	1943	1942	Total
Age	?	4	5	6	7	8	9	10	11	12	13	14	15	16	
3-cm. group	ACTUAL NUMBERS OF OTOLITHS READ														
51-53	-	2	-	-	-	-	-	-	-	-	-	-	-	-	2
54-56	-	1	6	-	-	-	-	-	-	-	-	-	-	-	7
57-59	1	-	6	2	-	-	-	-	-	-	-	-	-	-	9
60-62	2	-	6	1	1	-	-	-	-	-	-	-	-	-	10
63-65	-	-	11	2	-	1	-	-	-	-	-	-	-	-	14
66-68	1	-	4	2	-	-	-	-	-	-	-	-	-	-	7
69-71	1	-	3	5	5	2	-	2	1	-	-	-	-	-	19
72-74	-	-	-	4	6	6	-	-	2	-	-	-	-	-	18
75-77	1	-	-	-	5	4	4	-	2	-	1	-	-	-	17
78-80	2	-	-	-	2	11	-	1	4	-	-	1	-	-	21
81-83	-	-	-	-	1	3	-	2	3	-	1	-	-	-	10
84-86	1	-	-	-	-	-	-	-	5	1	-	-	-	-	7
87-89	2	-	-	-	-	-	-	-	3	1	-	-	-	-	6
90-92	-	-	-	-	-	-	-	1	1	-	-	-	-	-	2
93-95	-	-	-	-	-	-	-	1	1	-	-	-	-	-	2
96-98	-	-	-	-	-	-	-	-	2	-	-	-	-	-	2
99-101	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
Total	11	3	36	16	20	27	4	7	24	2	2	1	-	1	154

1) Measurements made of total length. (cont'd.)

2) The length frequencies of this sample are given in Table 13; the age frequencies are given in Table 25.

TABLE 30 GERMANY - 1958 AGE/LENGTH KEY - COD[1)2)] by Arno Meyer
(cont'd.)

OTTER TRAWLER "Everling" - Research Sample 1F August Stations 1, 3, 4

Year-Class	?	1956	55	54	53	52	51	50	49	48	47	46	45	44	43	42		Total
Age	?	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	>16	
3-cm. group	ACTUAL NUMBERS OF OTOLITHS READ																	
18-20	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
21-23	-	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
24-26	-	23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23
27-29	1	31	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	34
30-32	1	4	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
33-35	1	-	9	1	-	-	-	-	-	-	-	-	-	-	-	-	-	11
36-38	-	-	5	1	2	-	-	-	-	-	-	-	-	-	-	-	-	8
39-41	-	-	2	6	2	1	-	-	-	-	-	-	-	-	-	-	-	11
42-44	1	-	-	1	10	2	-	-	-	-	-	-	-	-	-	-	-	14
45-47	-	-	-	-	21	1	-	-	-	-	-	-	-	-	-	-	-	22
48-50	-	-	-	-	42	5	1	-	-	-	-	-	-	-	-	-	-	48
51-53	2	-	-	-	46	16	3	-	-	-	-	-	-	-	-	-	-	67
54-56	1	-	-	-	24	14	4	-	-	-	-	-	-	-	-	-	-	43
57-59	1	-	-	-	5	13	8	1	-	-	-	-	-	-	-	-	-	28
60-62	1	-	-	-	2	14	5	7	1	-	-	-	-	-	-	-	-	30
63-65	1	-	-	-	-	4	12	15	2	-	-	-	-	-	-	-	-	34
66-68	2	-	-	-	-	5	11	36	1	-	5	-	-	-	-	-	-	60
69-71	1	-	-	-	-	2	7	27	7	1	6	-	1	-	-	-	-	52
72-74	5	-	-	-	-	1	-	24	5	1	8	-	-	-	-	-	-	44
75-77	2	-	-	-	-	-	1	14	3	-	3	-	-	-	-	-	-	23
78-80	-	-	-	-	-	-	-	5	2	-	1	-	2	-	-	-	-	10
81-83	-	-	-	-	-	-	-	6	2	-	-	-	-	-	-	-	-	8
84-86	2	-	-	-	-	-	-	-	3	2	1	-	-	-	-	-	-	8
87-89	-	-	-	-	-	-	-	1	-	-	-	-	1	-	-	2	-	4
90-92	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1
93-95	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	2
96-98	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	3	4
99-101	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1
>114	1	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	1	5
Total	23	71	23	9	154	78	52	136	26	4	24	-	9	-	-	5	4	618

1) Measurements made of total length. (cont'd.)

2) The length frequencies of these samples are given in Table 1[illegible]; the age frequencies are given in Table 25.

TABLE 30 GERMANY - 1958 AGE/LENGTH KEY - COD[1)2)] by Arno Meyer
(cont'd.)

OTTER TRAWLER "Saarbrücken" - Research Samples 1F September Stations 1, 4, 6

Year-Class	?	1956	'55	'54	'53	'52	'51	'50	'49	'48	'47	'46	'45	'44	'43	'42		Total
Age	?	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	>16	
3-cm. group	ACTUAL NUMBERS OF OTOLITHS READ																	
21-23	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
24-26	-	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9
27-29	-	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16
30-32	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
33-35	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
36-38	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
39-41	-	-	3	1	-	-	-	-	-	-	-	-	-	-	-	-	-	4
42-44	1	-	1	-	3	-	-	-	-	-	-	-	-	-	-	-	-	5
45-47	-	-	-	-	6	-	-	-	-	-	-	-	-	-	-	-	-	6
48-50	-	-	-	-	9	2	-	-	-	-	-	-	-	-	-	-	-	11
51-53	2	-	-	-	28	5	-	-	-	-	-	-	-	-	-	-	-	35
54-56	-	-	-	-	21	8	2	-	-	-	-	-	-	-	-	-	-	31
57-59	-	-	-	-	7	10	1	2	-	-	-	-	-	-	-	-	-	20
60-62	2	-	-	-	1	12	7	2	-	-	-	-	-	-	-	-	-	24
63-65	2	-	-	-	-	6	8	14	-	-	2	-	-	-	-	-	-	32
66-68	2	-	-	-	-	1	3	14	-	-	4	-	-	-	-	-	-	24
69-71	4	-	-	-	-	-	3	19	4	-	7	1	-	-	-	-	-	38
72-74	4	-	-	-	-	-	1	15	6	-	10	-	-	-	-	-	-	36
75-77	3	-	-	-	-	-	1	10	5	-	1	1	-	-	-	1	-	22
78-80	5	-	-	-	-	-	-	5	3	-	1	-	-	-	1	2	-	17
81-83	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1
84-86	1	-	-	-	-	-	-	-	1	1	-	-	1	-	-	-	-	4
87-89	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1
90-92	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
93-95	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	2
Total	26	28	7	1	75	44	26	83	19	1	25	2	2	-	1	3	1	344

1) Measurements made of total length. (cont'd.)

2) The length frequencies of these samples are given in Table 13; the age frequencies are given in Table 25.

TABLE 30 GERMANY - 1958 AGE/LENGTH KEY - COD[1)2)] by Arno Meyer
(cont'd.)

OTTER TRAWLER "Anton Dohrn" - Research Sample 1F September Station 2620

Year-Class	?	1956	1955	1954	1953	1952	1951	1950	1949	1948	1947	1946	1945	1944	Total
Age	?	2	3	4	5	6	7	8	9	10	11	12	13	14	
3-cm. group	ACTUAL NUMBERS OF OTOLITHS READ														
21-23	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1
24-26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27-29	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1
30-32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33-35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36-38	-	-	3	-	-	-	-	-	-	-	-	-	-	-	3
39-41	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1
42-44	-	-	-	-	3	-	-	-	-	-	-	-	-	-	3
45-47	-	-	-	-	6	-	-	-	-	-	-	-	-	-	6
48-50	1	-	-	-	4	2	-	-	-	-	-	-	-	-	7
51-53	1	-	-	-	3	3	-	-	-	-	-	-	-	-	7
54-56	-	-	-	-	2	2	-	-	-	-	-	-	-	-	4
57-59	-	-	-	-	1	4	1	1	1	-	-	-	-	-	8
60-62	1	-	-	-	-	2	-	1	-	-	-	-	-	-	4
63-65	-	-	-	-	-	2	3	8	2	-	1	-	-	-	16
66-68	1	-	-	-	-	-	4	17	4	1	3	-	-	-	30
69-71	-	-	-	-	-	1	2	15	2	1	6	-	-	-	27
72-74	1	-	-	-	-	-	-	11	4	-	4	2	-	-	22
75-77	3	-	-	-	-	-	-	2	4	-	2	-	1	1	13
78-80	1	-	-	-	-	-	-	1	-	-	2	-	-	-	4
81-83	-	-	-	-	-	-	-	-	2	-	1	-	-	-	3
84-86	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1
87-89	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
121	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1
Total	9	2	3	-	20	16	10	56	20	2	19	2	3	1	163

1) Measurements made of total length.

2) The length frequencies of this sample are given in Table 13; the age frequencies are given in Table 25.

TABLE 31 ICELAND - 1958 AGE/LENGTH KEY - COD[1] by Jón Jónsson

OTTER TRAWLERS - Exploratory Catches 1C August

Year-Class	1954	1953	1952	1951	1950	1949	1948	1947	1946	1945	1944	1943	1942	1935	?	Total
Age	4	5	6	7	8	9	10	11	12	13	14	15	16	23	?	
3-cm. group	ACTUAL NUMBERS OF OTOLITHS READ															
45-47	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1
48-50	1	4	-	-	-	-	-	-	-	-	-	-	-	-	-	5
51-53	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	4
54-56	1	7	1	-	-	-	-	-	-	-	-	-	-	-	-	9
57-59	-	5	-	-	-	-	-	-	-	-	-	-	-	-	1	6
60-62	-	4	3	-	-	-	-	-	-	1	-	-	-	-	-	8
63-65	-	1	1	1	2	-	1	-	-	-	-	-	-	-	-	6
66-68	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	2
69-71	-	-	3	2	4	-	-	1	1	-	-	-	1	-	-	12
72-74	-	-	-	1	4	1	1	-	-	-	-	-	-	-	-	7
75-77	-	-	-	-	-	1	-	4	-	2	-	-	-	-	-	7
78-80	-	-	-	1	3	-	2	4	-	2	-	1	-	-	1	14
81-83	-	-	-	-	-	-	1	1	1	3	-	1	5	-	-	12
84-86	-	-	-	-	1	-	-	-	-	3	-	-	1	-	-	5
87-89	-	-	-	-	-	-	-	1	-	2	-	-	-	-	-	3
90-92	-	-	-	-	-	-	-	1	-	1	-	-	-	-	1	3
93-95	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1
96-98	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
99-101	-	-	-	-	-	-	-	1	-	-	-	-	1	-	-	2
102-104	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
105-107	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
108-110	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1
111-113	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
114-116	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
129-131	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
141-143	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1
Total Number	2	27	9	5	14	2	5	14	2	14	-	3	9	1	5	112

1) The length frequencies of these samples are given in Table 14; the age frequencies are given in Table 26. (cont'd.)

The sample data is given on page 115.

TABLE 31 ICELAND - 1958 AGE/LENGTH KEY - COD[1] by Jón Jónsson
(cont'd.)

Male OTTER TRAWLERS - Exploratory Catches 2H July

Year-Class	1953	1952	1951	1950	1949	1948	1947	1946	1945	Total
Age	5	6	7	8	9	10	11	12	13	
3-cm. group	ACTUAL NUMBERS OF OTOLITHS READ									
39-41	2	-	-	-	-	-	-	-	-	2
42-44	-	-	-	-	-	-	-	-	-	-
45-47	2	2	1	-	-	-	-	-	-	5
48-50	1	4	2	-	-	-	-	-	-	7
51-53	-	-	2	3	-	1	-	-	-	6
54-56	-	-	1	3	1	1	-	-	-	6
57-59	-	2	-	1	2	2	-	-	-	7
60-62	-	-	-	-	1	-	-	2	-	3
63-65	-	-	-	-	-	-	-	-	-	-
66-68	-	-	-	-	-	-	-	-	-	-
69-71	-	-	-	-	-	-	-	-	1	1
Total Number	5	8	6	7	4	4	-	2	1	37

Female OTTER TRAWLERS - Exploratory Catches 2H July

Year-Class	1953	1952	1951	1950	1949	1948	1947	1946	1945	?	Total
Age	5	6	7	8	9	10	11	12	13	?	
3-cm. group	ACTUAL NUMBERS OF OTOLITHS READ										
42-44	-	2	-	-	-	-	-	-	-	-	2
45-47	-	5	-	-	-	-	-	-	-	-	5
48-50	2	3	1	2	-	-	-	-	-	-	8
51-53	-	-	7	2	1	-	-	-	-	2	12
54-56	-	1	4	4	4	2	-	-	-	-	15
57-59	-	-	2	2	3	1	3	-	-	-	11
60-62	-	-	-	1	1	-	1	1	2	1	7
63-65	-	-	1	1	-	1	-	1	-	-	4
66-68	-	-	-	-	1	-	-	2	-	-	3
69-71	-	-	-	-	-	-	-	2	-	-	2
Total Number	2	11	15	12	10	4	4	6	2	3	69

The sample data are given on page 115. (cont'd.)

1) The length frequencies of this sample are given in Table 14; the age frequencies are given in Table 26.

TABLE 31 ICELAND - 1958 (cont'd.) AGE/LENGTH KEY - COD[1] by Jón Jónsson

Male OTTER TRAWLERS - Exploratory Catches 2J July

Year-Class	1955	1954	1953	1952	1951	1950	1949	1948	1947	1946	1945	?	Total
Age	3	4	5	6	7	8	9	10	11	12	13	?	
3-cm. group	ACTUAL NUMBERS OF OTOLITHS READ												
33-35	1	-	-	-	-	-	-	-	-	-	-	-	1
36-38	-	-	-	-	-	-	-	-	-	-	-	-	-
39-41	-	1	1	1	-	-	-	-	-	-	-	-	3
42-44	-	-	2	1	1	-	-	-	-	-	-	-	4
45-47	-	-	1	-	1	-	-	-	-	-	-	-	2
48-50	-	-	2	4	3	1	-	-	-	-	-	-	10
51-53	-	-	3	3	1	-	-	-	-	-	-	1	8
54-56	-	-	2	1	1	1	1	-	-	-	-	1	7
57-59	-	-	-	-	-	1	-	1	-	-	-	-	2
60-62	-	-	-	1	-	1	-	1	1	-	-	-	4
63-65	-	-	-	-	-	-	-	1	-	-	-	-	1
66-68	-	-	-	1	-	-	-	-	1	-	-	-	2
-	-	-	-	-	-	-	-	-	-	-	-	-	-
78-80	-	-	-	-	-	-	-	-	-	-	1	-	1
Total Number	1	1	11	12	7	4	1	3	2	-	1	2	45

Female OTTER TRAWLERS - Exploratory Catches 2J July

Year-Class	1957	'56	'55	'54	'53	'52	'51	'50	'49	'48	'47	'46	'45	'44	'43	'42	?	Total
Age	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	?	
3-cm. group	ACTUAL NUMBERS OF OTOLITHS READ																	
27-29	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39-41	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
42-44	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	2
45-47	1	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	3
48-50	-	-	-	-	2	2	1	-	-	-	-	-	-	-	-	-	-	5
51-53	-	-	-	-	2	4	1	2	1	-	-	-	-	-	-	-	1	11
54-56	-	-	-	-	1	6	5	-	1	-	-	-	-	-	-	-	-	13
57-59	-	-	-	-	-	2	3	2	2	1	-	-	-	-	-	-	-	10
60-62	-	-	-	-	-	-	1	-	1	1	1	2	-	-	-	-	-	6
63-65	-	-	-	-	-	-	1	-	2	1	1	1	1	1	-	-	-	8
66-68	-	-	-	-	-	-	1	1	-	-	-	2	-	-	-	-	-	4
69-71	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1
72-74	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	2
75-77	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	2
78-80	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
102-104	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1
Total Number	1	1	1	1	6	15	14	5	8	3	5	6	2	1	-	1	1	71

The sample data is given on page 115. (cont'd.)

1) The length frequencies of these samples are given in Table 14; the age frequencies are given in Table 26.

TABLE 31 ICELAND - 1958 AGE/LENGTH KEY - COD[1] by Jón Jónsson
(cont'd.)

Male OTTER TRAWLERS - Exploratory Catches 2J-3K September

Year-Class	1955	1954	1953	1952	1951	1950	1949	1948	1947	-	1941	1940	?	Total
Age	3	4	5	6	7	8	9	10	11	-	17	18	?	
3-cm. group	ACTUAL NUMBERS OF OTOLITHS READ													
24-26	1	-	-	-	-	-	-	-	-	-	-	-	-	1
27-29	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30-32	3	-	-	-	-	-	-	-	-	-	-	-	-	3
33-35	2	-	-	-	-	-	-	-	-	-	-	-	-	2
36-38	1	-	-	-	-	-	-	-	-	-	-	-	-	1
39-41	1	-	-	-	-	-	-	-	-	-	-	-	-	1
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
51-53	-	-	1	-	-	1	-	-	-	-	-	-	1	3
54-56	-	-	1	3	-	1	1	-	-	-	-	-	-	6
57-59	-	-	-	1	1	-	-	-	-	-	-	-	1	3
60-62	-	-	1	3	-	-	-	-	-	-	-	-	1	5
63-65	-	-	-	1	-	-	-	-	-	-	-	-	-	1
66-68	-	-	-	1	-	-	-	-	-	-	-	-	-	1
69-71	-	-	-	-	1	-	-	-	-	-	-	-	-	1
72-74	-	-	-	1	-	-	-	-	-	-	-	-	-	1
75-77	-	-	-	-	-	-	-	-	-	-	-	-	-	-
78-80	-	-	-	-	-	-	-	-	-	-	-	-	-	-
81-83	-	-	-	-	-	-	-	-	-	-	-	1	-	1
84-86	-	-	-	-	-	-	-	-	-	-	-	-	-	-
87-89	-	-	-	-	-	-	-	1	1	-	-	-	-	2
90-92	-	-	-	-	-	-	-	-	-	-	-	-	-	-
93-95	-	-	-	-	-	-	-	1	-	-	-	-	-	1
96-98	-	-	-	-	-	-	-	-	-	-	-	-	-	-
99-101	-	-	-	-	-	-	-	-	-	-	1	-	-	1
Total Number	8	-	3	10	2	2	1	2	1	-	1	1	3	34

The sample data are given on page 115. (cont'd.)

1) The length frequencies of this sample are given in Table 14; the age frequencies are given in Table 26.

TABLE 31 ICELAND - 1958 (cont'd.) AGE/LENGTH KEY - COD[1] by Jón Jónsson

Female OTTER TRAWLERS - Exploratory Catches 2J-3K September

Year-Class	1955	1954	1953	1952	1951	1950	1949	1948	1947	1946	-	1940	?	Total
Age	3	4	5	6	7	8	9	10	11	12	-	18	?	
3-cm. group	ACTUAL NUMBERS OF OTOLITHS READ													
27-29	1	-	-	-	-	-	-	-	-	-	-	-	-	1
30-32	1	-	-	-	-	-	-	-	-	-	-	-	1	2
33-35	2	-	-	-	-	-	-	-	-	-	-	-	1	3
36-38	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39-41	3	-	-	-	-	-	-	-	-	-	-	-	-	3
42-44	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45-47	-	1	1	-	-	-	-	-	-	-	-	-	-	2
48-50	-	1	-	2	-	-	-	-	-	-	-	-	-	3
51-53	-	1	4	2	-	1	-	-	-	-	-	-	-	8
54-56	-	-	1	2	-	-	-	1	-	-	-	-	-	4
57-59	-	2	2	4	1	1	-	-	-	-	-	-	-	10
60-62	-	-	-	5	1	-	-	-	-	-	-	-	2	8
63-65	-	-	-	1	3	2	-	-	-	1	-	-	2	9
66-68	-	-	-	-	-	-	1	-	-	-	-	-	-	1
69-71	-	-	1	-	1	1	-	-	-	-	-	-	-	3
72-74	-	-	-	-	-	1	1	-	1	-	-	-	-	3
75-77	-	-	-	-	-	-	-	-	-	-	-	-	1	1
78-80	-	-	-	-	-	-	-	-	-	-	-	-	-	-
81-83	-	-	-	-	-	-	-	-	-	-	-	-	-	-
84-86	-	-	-	-	-	-	-	-	1	-	-	-	-	1
87-89	-	-	-	-	-	-	-	-	-	-	-	-	-	-
90-92	-	-	-	-	-	-	2	-	-	-	-	-	-	2
93-95	-	-	-	-	-	-	-	-	-	-	-	-	-	-
96-98	-	-	-	-	-	-	-	1	-	-	-	-	-	1
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
117-119	-	-	-	-	-	-	-	-	-	-	-	1	-	1
Total Number	7	5	9	16	6	6	4	2	2	1	-	1	7	66

The sample data is given on page 115. (cont'd.)

1) The length frequencies of this sample are given in Table 14; the age frequencies are given in Table 26.

TABLE 31 ICELAND - 1958 AGE/LENGTH KEY - COD[1] by Jón Jónsson
(cont'd.)

Male OTTER TRAWLERS - Exploratory Catches 3K September

Year-Class	1956	1955	1954	1953	1952	1951	1950	1949	?	Total
Age	2	3	4	5	6	7	8	9	?	
3-cm. group	ACTUAL NUMBERS OF OTOLITHS READ									
33-35	4	1	-	-	-	-	-	-	-	5
36-38	-	2	-	-	-	-	-	-	-	2
39-41	-	1	2	-	-	-	-	-	-	3
42-44	-	2	3	-	-	-	-	-	-	5
45-47	-	1	5	3	-	-	-	-	3	12
48-50	-	1	3	6	-	-	-	-	2	12
51-53	-	-	2	7	1	-	-	-	-	10
54-56	-	-	-	7	2	-	-	1	4	14
57-59	-	-	-	4	3	1	-	-	-	8
60-62	-	-	-	2	3	1	-	-	1	7
63-65	-	-	-	1	3	-	-	-	1	5
66-68	-	-	-	-	-	-	-	-	-	-
69-71	-	-	-	-	-	-	-	-	-	-
72-74	-	-	-	-	2	-	-	-	1	3
?	-	-	-	1	-	-	-	-	-	1
Total Number	4	8	15	31	14	2	-	1	12	87

Female OTTER TRAWLERS - Exploratory Catches 3K September

Year-Class	1956	1955	1954	1953	1952	1951	1950	1949	1948	1947	1946	?	Total
Age	2	3	4	5	6	7	8	9	10	11	12	?	
3-cm. group	ACTUAL NUMBERS OF OTOLITHS READ												
30-32	2	-	-	-	-	-	-	-	-	-	-	-	2
33-35	-	-	-	-	-	-	-	-	-	-	-	2	2
36-38	1	2	-	-	-	-	-	-	-	-	-	-	3
39-41	-	2	-	-	-	-	-	-	-	-	-	-	2
42-44	-	-	3	1	-	-	-	-	-	-	-	-	4
45-47	-	1	3	5	-	-	-	-	-	-	-	-	9
48-50	-	2	9	6	1	-	-	-	-	-	-	1	19
51-53	-	-	1	10	4	-	-	-	-	-	-	1	16
54-56	-	-	-	5	5	1	1	-	-	-	-	-	12
57-59	-	-	-	4	13	1	2	1	1	-	-	2	24
60-62	-	-	-	2	7	1	-	-	-	-	-	-	10
63-65	-	-	-	1	5	2	-	-	-	-	-	-	8
66-68	-	-	-	-	-	2	-	-	-	-	-	1	3
69-71	-	-	-	-	2	1	-	-	-	-	-	-	3
72-74	-	-	-	-	-	-	1	-	-	-	-	-	1
75-77	-	-	-	-	-	1	-	1	-	-	1	-	3
-	-	-	-	-	-	-	-	-	-	-	-	-	-
93-95	-	-	-	-	-	-	-	1	-	-	-	-	1
Total Number	3	7	16	34	37	9	4	3	1	-	1	7	122

[1] The length frequencies of these samples are given in Table 14; the age frequencies are given in Table 26.

The sample data are given on page 115.

TABLE 32 ICELAND - 1958 SAMPLE DATA for Table 31 by Jón Jónsson

OTTER TRAWLERS - Exploratory Catches

Subdivision	1C	2H			2J			2J-3K			3K		
Month	August	July			July			September			September		
Sex	1)	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total
Serial Numbers	4			2			1,3			5			6,7
Number of Samples	1			1			2			1			2
Number of Fish	112	37	69	106	45	71	116	34	66	100	87	122	209
Mean Age													
Mean Length (cm.)													
Mean Weight (kg.)													
Total Wt. Landed (Tons)										92			28
Estimated No.(millions)													
Mesh Size (mm.) manilla	110			110			110			110			110
Range of Depths (fm.)	100-140		180-230			168-215			170			156-170	

1) Data for males and females separately were not available.

TABLE 33 UNITED KINGDOM - 1958 AGE/LENGTH COMPOSITION - COD[1] by G.C. Trout R.W. Blacker

OTTER TRAWLERS - Commercial Landings Subarea 1

Year-Class	1953	1952	1951	1950	1949	1948	1947	1946	-	1944	Total
Age-Group	V	VI	VII	VIII	IX	X	XI	XII	-	XIV	
10-cm. group	NUMBERS CAUGHT PER 100 HOURS FISHING										
30-39	3	-	-	-	-	-	-	-	-	-	3
40-49	2248	613	-	-	-	-	-	-	-	-	2861
50-59	7144	4762	397	-	-	-	-	-	-	-	12303
60-69	372	3351	2980	3351	372	745	-	745	-	-	11916
70-79	-	-	1305	7175	3262	-	652	652	-	1305	14351
>79	-	-	-	1243	1657	-	414	414	-	-	3728
Total	9767	8726	4682	11769	5291	745	1066	1811	-	1305	45162
Age Freq.	216	193	104	261	117	16	24	40	-	29	1000

1) The length frequencies are given in Table 19.

TABLE 34 PORTUGAL - 1958

by Mario Ruivo
Glicinia V. Quartin

LENGTH/WEIGHT TABLE - COD

OTTER TRAWLERS & DORY VESSELS - Commercial Catches before Discarding

Subdivision	3-K-L-O-P		
Month		April-May	
3-cm. group	No. of Fish	Total Weight (Gr.)	Mean Weight (Gr.)
33-35	2	760	380
36-38	2	1,040	520
39-41	15	9,320	621
42-44	22	16,870	767
45-47	33	30,840	935
48-50	34	38,090	1,120
51-53	53	70,430	1,329
54-56	56	86,740	1,549
57-59	70	125,760	1,797
60-62	87	181,500	2,086
63-65	73	176,620	2,419
66-68	47	129,090	2,747
69-71	36	112,390	3,122
72-74	21	77,750	3,702
75-77	23	93,280	4,056
78-80	20	96,810	4,841
81-83	29	146,280	5,044
84-86	19	114,580	6,031
87-89	28	185,690	6,632
90-92	21	154,480	7,356
93-95	17	132,350	7,785
96-98	7	60,580	8,654
99-101	9	78,960	8,773
102-104	9	90,460	10,051
105-107	5	62,540	12,508
108-110	2	24,390	12,195
111-113	3	39,730	13,243
114-116	1	13,400	13,400
-	-	-	-
126-128	1	19,700	19,700
129-131	-	-	-
132-134	1	23,000	23,000
Total	746	...	...

HADDOCK - 1958

Guide to Tables

The numbers in the guide are page numbers. For a length frequency reference the page number alone is given. For an age frequency the page number is followed by A. For an age frequency with mean size at each age, the page number is followed by A'. For an age/length key or frequency the page number is followed by K. For a weight/length table the page number is followed by W. For discard experiments the page number is followed by D.

PAGE NUMBERS

	OTTER TRAWL				HOOK & LINE AND OTHER GEARS			
Subdivision	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
3N			125	125				
3O	119,125, 126	125	125					
3P south	126,133A' 133K							
4T		119	119					
4V		119	119,123D	119		121	121	122
4V-W		123D	119,123D	119,120				
4W	120	120,124D	120,124D	120,124D	122			
4X	121,127	121,127	121,127	121,127	122	122	122	122
5Y	128	128	128	128				
5Z	130,134K	130,134K	130,131 134K,135K	131,135K				

TABLE 35 CANADA (Maritimes and Quebec) - 1958 LENGTH FREQUENCIES - HADDOCK by W.R. Martin D.N. Fitzgerald

OTTER TRAWLERS - Commercial Samples

Subdivision	3O	4T			4V				4V-W		
Month	March	May	June	Sept.	April	May	Sept.	Nov.	Aug.	Sept.	Oct.
2-cm. group	FREQUENCIES in °/oo										
28-29	4	-	-	-	-	-	-	-	-	-	-
30-31	21	-	-	-	-	-	4	-	-	-	-
32-33	11	-	2	-	-	-	4	-	-	5	5
34-35	43	-	2	4	-	7	-	-	-	-	10
36-37	139	-	24	11	-	7	25	-	5	27	41
38-39	205	4	51	30	-	28	133	16	26	104	77
40-41	164	13	108	76	19	26	145	26	31	99	149
42-43	129	106	90	118	12	28	129	59	82	60	170
44-45	124	118	82	142	26	97	7?	85	46	68	164
46-47	78	126	74	120	107	136	128	161	92	99	103
48-49	53	159	55	109	167	216	9?	206	107	130	45
50-51	22	99	99	169	178	127	74	149	140	158	74
52-53	2	108	101	63	160	142	52	84	157	106	37
54-55	2	91	104	55	124	82	85	69	132	56	28
56-57	2	52	68	60	69	43	31	58	83	33	37
58-59	-	47	46	20	36	17	21	35	54	22	23
60-61	-	22	39	13	51	17	5	26	15	11	9
62-63	1	9	15	5	19	13	-	17	5	11	18
64-65	-	22	3	2	8	4	-	-	10	7	5
66-67	-	9	15	2	13	4	-	6	15	4	5
68-69	-	4	9	-	4	4	-	-	-	-	-
70-71	-	4	8	-	4	-	-	-	-	-	-
72-73	-	4	1	-	-	-	-	-	-	-	-
74-75	-	4	4	-	-	-	-	-	-	-	-
76-77	-	-	-	-	-	-	-	3	-	-	-
78-79	-	-	-	-	2	-	-	-	-	-	-
Total °/oo	1000	1001	1000	999	999	998	1001	1000	1000	1000	1000
Serial Numbers											
Number of Samples	4	1	3	2	2	1	1	2	1	1	1
Number Fish Measured	800	225	600	400	400	225	225	400	200	230	200
Mean Length (cm.)											
Mean Weight (kg.)	0.57	1.39	1.26	1.16	1.46	1.21	1.03	1.26	1.37	1.07	1.01
Total Wt. Landed (Tons)	2001	117	179	343	395	567	139	503	570	724	805
Estimated No. (millions)											
Mesh Size (inches)	4½ m	4½ m	4-4½ n	4-4½ n	4½ m	4¾-5 m	4½ m	4½-4¾ m	5 m	4¾ m	4¾ m
Range of Depths (fm.)	55-70	95-100	15-36	16-25	24-28	18-30	30	22-28	26-32	28-42	?

m - manilla; n - nylon.

(cont'd.)

TABLE 35 CANADA (Maritimes and Quebec) - 1958 (cont'd.) LENGTH FREQUENCIES - HADDOCK by W.R. Martin D.N. Fitzgerald

OTTER TRAWLERS - Commercial Samples

Subdivision	4W-W	4W									
Month	Nov.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
2-cm. group	FREQUENCIES in °/oo										
30-31	-	-	-	-	-	1	1	-	-	-	-
32-33	-	-	-	-	-	7	6	-	-	-	-
34-35	-	-	-	-	-	6	22	14	-	-	-
36-37	2	-	-	-	2	46	46	24	16	-	-
38-39	19	-	5	-	17	85	88	38	21	-	8
40-41	54	13	18	48	44	80	68	117	21	184	120
42-43	104	31	42	76	72	93	127	237	36	92	104
44-45	126	69	45	86	83	118	97	137	45	153	109
46-47	138	107	92	122	110	89	109	97	158	133	84
48-49	145	158	149	76	153	99	103	59	196	103	69
50-51	140	164	168	118	194	108	102	49	189	90	91
52-53	89	134	141	108	114	99	101	70	112	57	124
54-55	56	107	106	127	89	66	69	70	83	53	101
56-57	58	72	71	109	56	45	25	35	43	58	59
58-59	32	53	62	54	26	24	9	31	24	40	50
60-61	14	34	38	31	17	12	15	4	20	16	28
62-63	14	23	25	16	7	8	6	12	20	12	3
64-65	5	13	21	10	6	5	2	4	4	2	13
66-67	2	9	7	8	4	3	1	-	8	8	18
68-69	-	6	7	5	5	4	1	-	4	-	8
70-71	-	5	2	3	1	-	-	-	-	-	7
72-73	-	1	1	-	-	-	-	-	-	-	2
74-75	-	1	-	-	-	-	-	-	-	-	2
76-77	-	1	-	3	-	-	-	-	-	-	-
78-79	-	-	-	-	-	1	-	-	-	-	-
Total °/oo	998	1001	1000	1000	1000	999	998	998	1000	1001	1000
Serial Numbers											
Number of Samples	2	8	1	1	3	3	3	1	1	1	1
Number Fish Measured	420	1710	1200	390	685	871	830	230	200	400	600
Mean Length (cm.)											
Mean Weight (kg.)	1.22	1.40	1.45	1.32	1.27	1.05	1.04	1.07	1.37	1.32	1.31
Total Wt. Landed (Tons)	840	4834	1736	620	478	672	497	585	636	337	664
Estimated No.(millions)											
Mesh Size (inches	4¾ m	4½-5	4½	4½	4¾-4⅞	4¾-5¼	3½-4⅞	4½ m	4⅝ m	...	4½ m
Range of Depths (fm.)	24-36	34-76	55-70	40	28-64	22-60	20-38	20-30	28-38	38	58

m - manilla

(cont'd.)

TABLE 35 CANADA (Maritimes and Quebec) - 1958 (cont'd.) LENGTH FREQUENCIES - HADDOCK by W.R. Martin D.N. Fitzgerald

Commercial Samples

Gear	Otter Trawl							Longline			
Subdivision	4X							4V			
Month	Feb.	March	May	June	July	Sept.	Oct.	May	June	July	Aug.
2-cm. group	FREQUENCIES in °/oo										
30-31	-	-	-	-	-	3	-	-	-	-	-
32-33	10	-	-	2	6	11	-	-	-	-	-
34-35	20	-	6	11	24	33	20	-	-	-	-
36-37	50	-	24	38	73	55	58	-	-	-	-
38-39	104	-	87	68	130	77	58	-	-	3	-
40-41	252	18	147	142	156	85	58	-	10	12	2
42-43	228	36	164	180	134	99	70	26	10	13	10
44-45	183	75	144	148	113	107	40	6	25	27	5
46-47	59	166	108	131	85	128	33	45	35	43	22
48-49	50	119	86	77	65	115	41	45	70	70	82
50-51	25	133	86	88	48	95	108	58	90	122	110
52-53	10	135	47	73	45	75	122	143	110	153	150
54-55	5	96	47	24	36	56	122	104	155	138	165
56-57	-	79	23	4	26	28	162	123	150	145	200
58-59	-	62	16	12	28	17	41	65	150	97	100
60-61	-	48	8	-	13	7	27	65	105	52	60
62-63	5	14	8	-	7	3	27	78	40	35	38
64-65	-	5	-	-	5	3	-	65	20	28	20
66-67	-	8	-	-	4	1	-	71	5	23	18
68-69	-	4	-	-	2	-	-	52	15	20	5
70-71	-	-	-	-	-	-	14	26	5	15	3
72-73	-	1	-	-	-	-	-	13	-	-	3
74-75	-	-	-	-	-	-	-	6	5	2	2
76-77	-	1	-	-	-	-	-	6	-	-	5
78-79	-	-	-	-	-	-	-	-	-	2	-
Total °/oo	1001	1000	1001	998	1000	998	1001	997	1000	1000	1000
Serial Numbers											
Number of Samples	1	1	1	1	5	5	1	1	1	3	2
Number Fish Measured	202	760	270	419	3127	2600	154	154	200	600	400
Mean Length (cm.)											
Mean Weight (kg.)	1.15	1.53	1.02	1.02	0.91	1.20	1.43	2.00	1.74	1.78	1.77
Total Wt. Landed (Tons)	28	618	283	567	487	752	387	-	-	-	-
Estimated No.(millions)											
Mesh (in.) or Hook Size	3¾ n	4½ m	4 n	4 n	4½ m	3½n-4½m	4 n	#6/0	#6/0	#6/0	#6/0
Range of Depths (fm.)	29	60	20-40	20-40	40	20-30	50-60	45-55	18-28	18-28	18-28

m - manilla; n - nylon.

(cont'd.)

TABLE 35 CANADA (Maritimes and Quebec) - 1958 (cont'd.) LENGTH FREQUENCIES - HADDOCK

by W.R. Martin
D.N. Fitzgerald

Commercial Samples

Gear	Longline										Handline
Subdivision	4W		4W	4X							4X
Month	Oct.	Nov.	March	Jan.	March	May	June	July	Nov.	Dec.	June
2-cm. group	FREQUENCIES in °/oo										
32-33	-	-	-	-	-	-	-	-	-	-	11
34-35	-	-	3	3	-	-	-	-	-	2	32
36-37	7	-	-	3	-	-	-	-	-	6	43
38-39	19	10	5	3	-	-	6	-	-	10	64
40-41	25	20	14	24	21	-	33	16	-	14	43
42-43	29	40	18	33	9	3	23	16	6	42	106
44-45	39	45	52	70	21	3	29	8	12	45	64
46-47	57	35	64	66	63	53	45	84	36	37	117
48-49	78	45	72	75	37	109	85	62	92	76	117
50-51	93	60	127	118	98	141	164	100	118	109	117
52-53	141	125	108	116	121	134	138	109	148	115	96
54-55	145	135	131	95	107	150	114	119	154	81	53
56-57	118	130	116	104	137	125	117	157	156	116	21
58-59	100	140	79	67	130	94	93	100	116	111	43
60-61	67	60	69	68	67	53	67	76	82	104	32
62-63	35	70	58	57	77	56	33	76	40	64	21
64-65	25	20	35	28	44	25	18	28	22	14	21
66-67	7	15	20	22	28	16	16	24	6	22	-
68-69	4	15	18	20	28	31	11	10	10	18	-
70-71	9	15	8	15	2	6	6	10	2	13	-
72-73	1	15	2	9	-	-	-	5	-	-	-
74-75	1	5	-	3	2	-	-	-	-	1	-
76-77	-	-	-	-	5	-	-	-	-	-	-
78-79	-	-	-	1	2	-	-	-	-	-	-
Total °/oo	1000	1000	999	1000	999	999	998	1000	1000	1000	1001
Serial Numbers											
Number of Samples	5	1	2	2	1	1	2	1	1	1	1
Number Fish Measured	1000	200	800	1270	400	320	995	200	500	700	94
Mean Length (cm.)											
Mean Weight (kg.)	1.71	1.90	1.76	1.95	2.14	1.84	1.99	1.59	1.91	1.88	1.27
Total Wt. Landed (Tons)	18	34	160	207	478	82	24	11	202	154	?
Estimated No.(millions)											
Hook Size	#6/0	#6/0	#6/0	#6/0	#6/0	#6/0	#6/0	#6/0	#6/0	#6/0	
Range of Depths (fm.)	35-45	27-37	60	45	60	40-50	40	40	35	29	22

TABLE 36 CANADA (Maritimes and Quebec) - 1958 LENGTH FREQUENCIES - HADDOCK by W.R. Martin D.N. Fitzgerald

Paired Sea and Wharf samples taken to determine quantities and sizes discarded at sea

OTTER TRAWLERS

Subdivision	4V		4V-W			
Month	August		June		August	
	Sea	Wharf	Sea	Wharf	Sea	Wharf
2-cm. group	FREQUENCIES in °/oo					
20-21	-	-	-	-	8	-
22-23	-	-	-	-	15	-
24-25	-	-	-	-	-	-
26-27	-	-	1	-	15	-
28-29	3	-	2	-	23	-
30-31	3	-	4	-	23	-
32-33	17	-	14	-	54	-
34-35	23	2	17	-	-	2
36-37	63	7	26	-	23	8
38-39	47	21	42	2	92	12
40-41	83	40	44	48	92	18
42-43	103	59	49	62	115	49
44-45	73	74	63	102	100	108
46-47	107	70	84	132	162	173
48-49	97	130	119	130	46	220
50-51	83	116	134	137	77	176
52-53	113	157	136	159	38	97
54-55	73	94	81	87	46	72
56-57	43	115	64	43	23	41
58-59	30	58	39	29	8	8
60-61	30	31	31	27	31	11
62-63	-	16	14	17	8	6
64-65	3	5	17	3	-	-
66-67	3	5	11	10	-	-
68-69	-	-	5	10	-	-
70-71	-	-	1	-	-	-
72-73	-	-	4	-	-	-
Total °/oo	997	1000	1002	998	999	1001
Serial Numbers						
Number of Samples	1	1	1	1	1	1
Number Fish Measured	300	405	1071	393	130	438
Mean Length (cm.)						
Mean Weight (kg.)		1.43		1.31		1.29
Total Wt. Landed (Tons)		139		669		724
Estimated No. (millions)						
Mesh Size (inches)		4½ m		4½ m, 4½ n		4½ m
Range of Depths (fm.)		15-29		...		20-34

m - manilla; n - nylon.

(cont'd.)

TABLE 36 CANADA (Maritimes and Quebec) - 1958 (cont'd.) LENGTH FREQUENCIES - HADDOCK by W.R. Martin D.N. Fitzgerald

Paired Sea and Wharf samples taken to determine quantities and sizes discarded at sea

OTTER TRAWLERS

Subdivision	4W					
Month	June		July		December	
	Sea	Wharf	Sea	Wharf	Sea	Wharf
2-cm. group	FREQUENCIES in °/oo					
26-27	-	-	3	-	-	-
28-29	1	-	14	-	4	-
30-31	1	-	32	-	4	-
32-33	4	-	26	-	11	-
34-35	9	-	18	-	6	-
36-37	23	1	37	-	19	-
38-39	35	17	63	1	28	6
40-41	47	59	60	11	32	12
42-43	74	108	62	40	40	37
44-45	103	134	83	94	47	61
46-47	120	155	92	107	64	92
48-49	157	126	133	152	61	96
50-51	144	121	126	193	84	106
52-53	106	105	97	186	117	88
54-55	71	84	69	107	93	90
56-57	48	44	31	51	95	95
58-59	25	23	17	28	63	75
60-61	17	12	14	11	68	57
62-63	6	5	9	9	52	39
64-65	5	1	5	6	36	50
66-67	2	1	4	1	27	39
68-69	1	-	3	2	18	27
70-71	-	1	1	-	11	23
72-73	-	-	-	-	11	2
74-75	-	-	-	-	5	5
76-77	-	-	-	-	3	-
78-79	-	-	-	-	-	2
Total °/oo	999	997	999	999	999	1002
Serial Numbers						
Number of Samples	1	1	2	2	1	1
Number Fish Measured	3034	765	3070	944	783	515
Mean Length (cm.)						
Mean Weight (kg.)		1.33		1.28		2.02
Total Wt. Landed (Tons)		478		672		664
Estimated No. (millions)						
Mesh Size (inches)		4½ m		4½ m		4½ n
Range of Depths (fm.)		32-68		17-33		28-84

m - manilla; n - nylon.

TABLE 37 CANADA (Newfoundland) - 1958 LENGTH FREQUENCIES - HADDOCK by A.M. Fleming

OTTER TRAWLERS (Offshore) - Commercial Landings

Subdivision	3N		3O		
Quarter	July-Sept.	Oct.-Dec.	Jan.-March	April-June	July-Sept.
2-cm. group	FREQUENCIES in °/oo				
22-23	-	-	1	1	-
24-25	-	1	2	1	-
26-27	2	9	4	2	3
28-29	6	31	11	11	7
30-31	36	86	17	14	29
32-33	110	185	21	15	78
34-35	122	158	47	37	85
36-37	97	82	122	123	111
38-39	113	76	194	182	114
40-41	155	97	200	192	179
42-43	140	101	152	135	134
44-45	101	73	108	107	104
46-47	57	49	64	81	72
48-49	35	27	31	48	49
50-51	16	14	14	28	20
52-53	5	7	6	11	7
54-55	2	2	3	4	7
56-57	1	2	2	4	-
58-59	-	-	1	2	-
60-61	1	-	-	3	3
Total °/oo	999	1000	1000	1001	1002
Serial Numbers					
Number Fish Measured	2982	5740	18227	3801	307
Number of Samples	10	17	42	11	1
Mean Length (cm.)					
Mean Weight (kg.)	0.60	0.50	0.60	0.65	0.64
Total Wt. Landed (Tons)	895	3524	7688	3842	60
Estimated No. (millions)					
Mesh Size (inches) manilla	4	4	4	4	4
Range of Depths (fm.)	24-90	25-62	48-130	38-110	27

TABLE 38 GERMANY - 1958 LENGTH FREQUENCIES - HADDOCK by Arno Meyer

OTTER TRAWLERS - Commercial Landings

Subdivision	3P south[1]	3O
Month	February	March
2-cm. group	FREQUENCIES in °/oo	
36-37	-	4
38-39	4	26
40-41	8	48
42-43	95	294
44-45	147	253
46-47	199	214
48-49	170	66
50-51	147	46
52-53	124	27
54-55	45	14
56-57	27	6
58-59	10	1
60-61	9	1
62-63	6	-
64-65	4	-
66-67	1	-
68-69	2	-
70-71	2	-
Total °/oo	1000	1000
Serial Numbers	9	23
Number of Samples	1	1
Number Fish Measured	271	289
Mean Length (cm.)		
Mean Weight (kg.)	0.85	0.67
Total Wt. Landed (Tons)	19	140
Estimated No. (millions)	0.02	0.21
Mesh Size (mm.)	110	110
Range of Depths (fm.)		

1) The age frequencies of this sample are given in Table 43; the age/length key is given in Table 44.

TABLE 39 UNITED STATES/CANADA CO-OPERATIVE PROGRAMME - 1958/59 LENGTH FREQUENCIES - HADDOCK by J.P. Wise F.A. Dreyer

ALL GEARS - Commercial Landings (in hundreds) Subdivision 4X

Length cms.	Feb./ Apr.	May/ July	Aug./ Oct.	Nov./ Jan.	Total
33	---	27	---	8	35
34	44	41	37	25	147
35	---	208	91	16	315
36	44	401	196	95	736
37	176	858	422	134	1,590
38	307	1,098	458	239	2,102
39	484	1,759	367	206	2,816
40	793	1,980	651	220	3,644
41	1,413	1,927	521	311	4,172
42	1,803	1,841	805	202	4,651
43	1,951	1,426	791	293	4,461
44	2,837	1,429	760	449	5,475
45	3,455	1,414	689	369	5,927
46	3,194	1,327	522	349	5,392
47	4,880	1,193	842	398	7,313
48	4,563	1,069	941	499	7,072
49	4,587	1,123	838	525	7,073
50	4,768	1,278	850	708	7,604
51	5,373	1,404	707	730	8,214
52	5,895	1,553	1,025	593	9,066
53	5,406	1,071	844	573	7,894
54	5,021	1,050	1,218	612	7,901
55	4,091	1,041	1,219	476	6,827
56	4,322	956	1,410	518	7,206
57	3,811	870	1,304	517	6,502
58	3,139	804	841	550	5,334
59	2,806	696	785	341	4,628
60	2,022	463	729	437	3,651
61	1,556	396	545	391	2,888
62	1,345	370	390	296	2,401
63	1,117	193	429	216	1,955
64	668	224	238	160	1,290
65	661	99	263	128	1,151
66	488	157	364	158	1,167
67	321	147	205	128	801
68	380	95	150	98	723
69	198	137	97	107	539
70	95	9	58	68	230
71	64	3	42	51	160
72	64	1	58	9	132
73	13	---	15	9	37
74	13	15	14	9	51
75	32	15	14	9	70
76	32		27	13	72
77	19			---	19
78	---			8	8
79	19			---	19
80				4	4
Total	84,270	32,168	22,772	12,255	151,465

See page 129 for Samples and Landings Data.

(cont'd.)

TABLE 39 (cont'd.) UNITED STATES/CANADA CO-OPERATIVE PROGRAMME - 1958/59 LENGTH FREQUENCIES - HADDOCK by J.P. Wise F.A. Dreyer

ALL GEARS - Commercial Landings (in hundreds) Subdivision 5Y

Length cms.	Feb./ Apr.	May/ July	Aug./ Oct.	Nov./ Jan.	Total
30	4				4
31	---				---
32	---				---
33	---		1		1
34	---		---		---
35	---	1	3		4
36	11	1	5	9	26
37	4	11	26	31	72
38	30	33	65	103	231
39	134	88	117	167	506
40	234	124	105	250	713
41	457	212	155	389	1,213
42	727	301	162	389	1,579
43	950	344	232	547	2,073
44	1,134	441	269	591	2,435
45	1,219	627	232	420	2,498
46	1,354	524	325	367	2,570
47	1,461	661	351	420	2,893
48	1,294	703	418	347	2,762
49	1,398	638	375	357	2,768
50	1,603	644	329	245	2,821
51	1,579	444	300	260	2,583
52	1,450	558	339	297	2,644
53	1,419	392	269	256	2,336
54	1,233	388	256	256	2,133
55	1,037	337	221	242	1,837
56	937	418	218	196	1,769
57	761	367	208	185	1,521
58	726	316	163	185	1,390
59	624	358	173	159	1,314
60	497	302	150	122	1,071
61	414	233	135	94	876
62	276	227	117	105	725
63	252	232	122	94	700
64	198	121	86	79	484
65	134	102	84	63	383
66	113	109	69	67	358
67	86	86	52	39	263
68	50	88	48	35	221
69	49	37	41	21	148
70	59	36	18	12	125
71	19	34	18	16	87
72	29	16	11	13	69
73	35	27	3	7	72
74	22	10	7	7	46
75	4	1	1	4	10
76	4	2	1	1	8
>76	2	2			4
Total	24,023	10,596	6,280	7,447	48,346

See page 129 for Samples and Landings Data.

TABLE 40 UNITED STATES/CANADA CO-OPERATIVE PROGRAMME - 1958/59

by J.P. Wise
F.A. Dreyer

SAMPLES AND LANDINGS DATA - HADDOCK
for Table 39

ALL GEARS - Commercial Landings Subdivision 4X

Quarters	Feb./ Apr.	May/ July	Aug./ Oct.	Nov./ Jan.	Total
No. samples	59	17	21	16	113
No. measured	4,060	3,162	1,501	1,995	10,718
Mean wt. of fish (Kg.)	1.43	1.19	1.55	1.63	1.41
Wt. landings sampled 1/	6.26	4.19	2.39	3.48	16.32
Wt. total landings 1/	12,051	3,854	3,520	1,994	21,419
Est. no. in landings 2/	8,427	3,217	2,277	1,226	15,147

ALL GEARS - Commercial Landings Subdivision 5Y

Quarters	Feb./ Apr.	May/ July	Aug./ Oct.	Nov./ Jan.	Total
No. samples	167	88	108	105	468
No. measured	7,966	5,099	6,683	5,298	25,046
Mean wt. of fish (Kg.)	1.37	1.48	1.49	1.39	1.41
Wt. landings sampled 1/	11.60	8.47	10.92	9.33	40.32
Wt. total landings 1/	3,281	1,569	938	1,036	6,824
Est. no. in landings 2/	2,402	1,060	628	745	4,835

1/ Metric tons, round fresh

2/ In millions

TABLE 41 UNITED STATES - 1958/59 LENGTH FREQUENCIES - HADDOCK by J.P. Wise
F.A. Dreyer

Subdivision 5Z Numbers Landed in hundreds

Length cm.	1958 Feb.	Mar.	Apr.	May	June	July	Aug.
32							
33					19		23
34					94	14	93
35				53	113	68	148
36		8		80	170	233	418
37		22	14	115	307	356	524
38	258	85	108	299	454	534	720
39	103	108	135	256	812	1,121	975
40	242	145	190	829	760	995	1,237
41	271	174	448	731	959	1,392	1,568
42	698	358	325	1,216	1,114	1,514	2,102
43	543	390	664	652	929	1,420	1,962
44	389	404	599	1,675	1,530	1,270	2,352
45	1,217	586	968	1,896	1,460	1,343	1,876
46	931	603	720	2,036	1,875	1,301	2,142
47	725	494	766	2,501	1,474	1,105	1,926
48	682	543	893	2,461	1,989	1,160	1,888
49	1,006	719	901	2,604	1,973	1,160	1,449
50	818	723	1,117	1,600	2,153	1,116	1,659
51	735	743	1,055	1,444	1,387	855	1,135
52	649	700	1,000	1,650	1,199	986	1,073
53	916	826	801	1,175	1,080	872	1,161
54	582	885	933	1,049	1,010	799	886
55	650	647	974	1,172	1,016	719	763
56	646	713	662	874	635	690	722
57	684	534	603	1,119	689	596	603
58	688	551	771	1,122	666	516	473
59	425	478	614	1,330	687	457	374
60	448	405	494	1,123	497	381	264
61	456	419	403	1,016	556	288	319
62	418	362	487	885	484	312	213
63	327	300	352	938	308	291	303
64	274	308	335	644	256	200	196
65	312	242	285	605	272	196	215
66	175	155	238	551	150	196	98
67	235	174	141	461	178	112	101
68	167	113	172	381	93	108	111
69	137	126	84	264	154	103	76
70	114	82	86	280	118	39	60
71	53	25	46	181	100	39	60
72	53	44	46	138	14	39	39
73	45	57	28	154	29	43	25
74	61	13	17	108	36	4	51
75	---	13	23	69	11	---	11
76	23	13	6	69	22	---	---
77	23	13		69	11	---	6
>77	15	19		24	22	9	6
Total	17,194	14,322	18,504	37,899	29,865	24,952	32,406

See page 132 for Samples and Landings Data.

(cont'd.)

TABLE 41 UNITED STATES - 1958/59 LENGTH FREQUENCIES - HADDOCK by J.P. Wise
(cont'd.) F.A. Dreyer
Subdivision 5Z Numbers Landed in hundreds

Length cm.	Sept.	Oct.	Nov.	Dec.	1959 Jan.	Total
32	51	15				66
33	17	30	13			102
34	85	75	97	25	19	502
35	51	135	138	41	58	805
36	255	376	151	82	116	1,889
37	438	534	69	41	190	2,610
38	654	708	108	106	392	4,426
39	1,047	936	143	213	398	6,247
40	1,314	1,337	315	156	257	7,777
41	1,674	1,377	361	181	369	9,505
42	2,125	1,497	529	312	611	12,401
43	2,837	1,467	709	379	688	12,640
44	2,493	1,780	932	429	708	14,561
45	2,326	1,625	798	515	828	15,438
46	2,238	1,678	633	456	886	15,499
47	2,140	1,239	765	493	850	14,478
48	1,443	1,518	883	566	884	14,910
49	1,342	1,174	822	430	772	14,352
50	1,379	1,052	753	402	749	13,521
51	1,196	977	738	504	584	11,353
52	953	807	718	380	673	10,788
53	922	702	541	434	684	10,114
54	679	620	440	341	652	8,876
55	531	377	320	288	641	8,098
56	403	297	291	259	534	6,726
57	338	254	241	296	552	6,509
58	241	218	194	253	518	6,211
59	171	179	223	194	414	5,546
60	170	131	109	197	344	4,563
61	141	114	110	215	312	4,349
62	112	72	87	243	342	4,017
63	109	82	109	208	298	3,625
64	54	61	52	156	292	2,828
65	45	49	73	120	210	2,624
66	50	28	76	105	166	1,988
67	34	34	54	106	132	1,762
68	12	21	31	90	137	1,436
69	14	9	31	78	93	1,169
70	7	20	24	46	63	939
71	19	14	21	34	59	651
72	8	10	21	28	24	464
73	9	8	12	33	24	467
74	---	8	9	17	34	358
75	7	---	7	3	---	144
76	3	3	5	11	---	155
77	4	3	7	---	---	136
>77	3		2	3	10	113
Total	30,144	23,651	12,765	9,469	16,567	267,738

See page 132 for Samples and Landings Data.

TABLE 42 UNITED STATES - 1958/59 SAMPLES AND LANDINGS DATA - HADDOCK for Table 41

by J.P. Wise
F.A. Dreyer

Subdivision 5Z

Month	February	March	April	May	June	July
Days Fished	254	294	402	999	850	961
Number Length Samples	22	31	36	30	30	75
Number Scale Samples	11	20	31	21	21	38
Number Fish Measured	1094	1823	2085	1982	1990	3064
Number Fish Aged	272	207	200	400	410	291
Mean Weight (kg.)	1.66	1.67	1.43	1.49	1.33	1.24
Total Wt. Landed (Tons)	2849	2387	2643	5657	3966	3106
Estimated No. (millions)	1719	1432	1850	3790	2987	2495
Est. Wt. Landings Sampled (Tons)	2.19	3.18	3.34	3.47	3.09	4.64

Month	August	September	October	November	December	January '59	Total
Days Fished	1583	1403	968	518	470	634	9336[1]
Number Length Samples	74	85	87	42	46	65	623
Number Scale Samples	19	28	35	18	22	32	296
Number Fish Measured	2854	3463	3716	1920	1960	2455	28406
Number Fish Aged	439	231	283	365	241	165	3504
Mean Weight (kg.)	1.23	1.13	1.13	1.34	1.58	1.54	1.36
Total Wt. Landed (Tons)	4001	3395	2682	1706	1498	2546	36436
Estimated No. (millions)	3241	3014	2365	1277	947	1657	26774
Est. Wt. Landings Sampled (Tons)	4.37	4.89	5.33	3.34	3.66	4.24	45.74

1) Actual days fished (weighted by seasons) is 7000.

TABLE 43 GERMANY - 1958 AGE FREQUENCIES - HADDOCK[1] by Arno Meyer

OTTER TRAWLERS - Commercial Landings

Subdivision		3P south	
Month		February	
Year-Class	Age	°/oo	Mean Length
1953	5	12	-
1952	6	234	47.2
1951	7	85	46.1
1950	8	6	-
1949	9	648	49.7
1948-	>9	15	-
Total °/oo		1000	
Serial Number		9	
Number Aged		144	

1) The length frequencies of this sample are given in Table 38; the age/length key is given in Table 44 below.

TABLE 44 GERMANY - 1958 AGE/LENGTH KEY - HADDOCK[1] by Arno Meyer

OTTER TRAWLERS - Commercial Landings 3P south February Serial No. 9

Year-Class	?	1953	1952	1951	1950	1949	1948-	Total
Age	?	5	6	7	8	9	>9	
3-cm. group[2]	ACTUAL NUMBERS							
39-41	-	-	2	-	-	-	-	2
42-44	1	-	1	1	-	1	-	4
45-47	5	-	6	1	-	15	-	27
48-50	2	1	5	1	-	15	-	24
51-53	3	-	2	1	-	12	-	18
54-56	2	-	2	-	2	20	-	26
57-59	5	-	-	-	-	13	-	18
60-62	5	-	-	-	-	4	3	12
63-65	2	-	-	-	-	2	4	8
66-68	-	-	-	-	-	-	2	2
69-71	1	-	-	-	-	-	2	3
Total	26	1	18	4	2	82	11	144

1) The length frequencies of this sample are given in Table 38; the age frequencies are given in Table 43 above.

2) Measurements made of total length.

TABLE 45 UNITED STATES - 1958/59 AGE/LENGTH KEY - HADDOCK by J.P. Wise F.A. Dreyer

Part I - February-April Subdivision 5Z % each age by 3-cm. groups

Length cms.	I	II	III	IV	V	VI	VII	VIII	IX+
36-38		50.1	49.7	0.2					
39-41		14.2	81.2	4.6					
42-44		4.1	64.6	31.3					
45-47		2.5	32.8	60.3	4.4				
48-50			14.7	57.3	25.2	2.2	0.6		
51-53			5.2	50.9	36.6	7.3			
54-56			1.5	27.9	42.8	22.9	4.9		
57-59			0.2	18.6	36.8	29.9	9.4	5.1	
60-62				3.9	34.3	45.6	12.6	2.2	1.4
63-65					15.8	39.7	28.4	13.2	2.9
66-68					14.8	40.9	32.5	9.6	2.2
69-71					0.4	37.6	26.3	29.6	6.1
72-74							24.2	42.8	33.0
75-77						21.9	10.5	37.7	29.9
78-80									100.0

Part II - May-July Subdivision 5Z % each age by 3-cm. groups

Length cms.	I	II	III	IV	V	VI	VII	VIII	IX+
33-35		100.0							
36-38		87.1	12.9						
39-41		77.3	22.7						
42-44		35.2	42.8	17.3	4.7				
45-47		2.9	44.3	51.7	1.1				
48-50			53.9	39.1	6.8	0.2			
51-53		0.7	18.8	56.9	19.0	4.6			
54-56			8.5	45.9	36.8	8.2	0.6		
57-59				33.1	38.2	24.1	3.7	0.9	
60-62				11.9	44.1	32.8	6.9	4.3	
63-65				2.0	21.1	48.0	12.6	12.5	3.8
66-68				0.2	11.6	58.9	22.2	5.9	1.2
69-71					3.8	36.2	38.7	16.8	4.5
72-74						3.5	43.9	33.8	18.8
75-77							44.2	2.8	53.0
78-80							46.6		53.4
81-83									
84-86									100.0

(cont'd.)

TABLE 45 UNITED STATES - 1958/59 AGE/LENGTH KEY - HADDOCK by J.P. Wise
(cont'd.) F.A. Dreyer
Part III - August-October Subdivision 5Z % each age by 3-cm. groups

Length cms.	I	II	III	IV	V	VI	VII	VIII	IX+
30-32	93.9	6.1							
33-35	33.9	66.1							
36-38	7.5	88.7	3.8						
39-41	1.3	95.0	3.7						
42-44	2.6	77.8	17.4	2.2					
45-47	3.6	37.3	52.6	6.5					
48-50		10.7	65.4	20.4	2.9	0.6			
51-53		4.7	54.1	33.4	6.9	0.9			
54-56			27.0	45.1	19.7	7.1	1.1		
57-59			6.1	50.0	20.5	17.9	4.6	0.9	
60-62				47.2	18.1	17.8	15.5		1.4
63-65				19.7	38.4	22.4	13.5		6.0
66-68				4.5	19.4	25.2	33.1	14.1	3.7
69-71						37.3	33.0	13.6	16.1
72-74						0.6	31.6	27.8	40.0
75-77							16.2	64.9	18.9
78-80									100.0

Part IV - November-January Subdivision 5Z % each age by 3-cm. groups

Length cms.	I	II	III	IV	V	VI	VII	VIII	IX+
33-35	98.2	1.8							
36-38	92.1	7.9							
39-41	16.1	80.8	3.0	0.1					
42-44		90.4	9.6						
45-47		83.8	15.9	0.3					
48-50		39.1	56.1	1.2	3.6				
51-53		3.3	65.1	25.1	6,5				
54-56			45.0	36.1	17.3	1.6			
57-59			12.9	53.0	22.7	9.6	1.8		
60-62				20.0	55.4	14.0	10.6		
63-65				7.7	44.9	40.6		4.8	2.0
66-68				4.8	22.9	49.1	15.5	1.3	6.4
69-71					7.1	51.5	15.1	24.1	2.2
72-74							22.8	76.2	1.0
75-77							3.0	12.1	84.9
78-80							6.7	6.7	86.6

REDFISH - 1958

Guide to Tables

The numbers in the guide are page numbers. For a length frequency reference the page number alone is given. For an age frequency the page number is followed by A. For an age frequency with mean size at each age, the page number is followed by A'. For an age/length key or frequency the page number is followed by K. For a weight/length table the page number is followed by W. For discard experiments the page number is followed by D.

PAGE NUMBERS

Subdivision	OTTER TRAWL			
	January-March	April-June	July-September	October-December
1C		147	147	
1D		144*	144*	144*
1F				144*
2H			145,146	
2J			140,145,146,148,151	148,151
3K			145,146	148,149
3L		149	149	140,149
3M	150	150	150	150
3N	140	141	141	141
3O	141	142		142
3P south			142	142
3N-O-P	152	153	153	154
4R		143	139,143	139
4R-S			139	
4S		143	143	
4R-S-T		155	155,156	
4V-W-X	157	158	159	160
5Y-Z	161	162	163	164

* Shrimp Trawl

TABLE 46 CANADA (Quebec) - 1958 LENGTH FREQUENCIES - REDFISH by J.M. Boulanger

Subdivision	4R-S			4R								
Month	July			August			September			October		
Sex	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total
cm.	FREQUENCIES in °/oo											
22	-	-	-	-	1	1	-	-	-	-	-	-
23	-	-	-	1	1	2	-	-	-	-	-	-
24	-	-	-	1	3	4	-	-	-	-	-	-
25	-	-	-	1	-	1	-	-	-	5	-	5
26	-	-	-	-	1	1	-	-	-	-	-	-
27	4	-	4	1	-	1	-	-	-	-	-	-
28	-	-	-	1	1	2	5	-	5	5	-	5
29	1	-	1	5	-	5	-	5	5	5	-	5
30	6	-	6	3	-	3	-	-	-	10	-	10
31	4	-	4	7	-	7	5	5	10	5	-	5
32	11	2	13	15	1	16	25	10	35	10	-	10
33	34	1	35	21	-	21	50	5	55	60	5	65
34	64	2	66	56	1	57	45	5	50	90	5	95
35	99	5	104	79	5	84	110	5	115	85	-	85
36	135	5	140	116	5	121	95	-	95	80	-	80
37	123	8	131	119	19	138	100	30	130	120	35	155
38	86	10	96	70	23	93	85	25	110	55	65	120
39	44	34	78	17	60	77	25	50	75	15	75	90
40	24	68	92	8	103	111	10	85	95	10	105	115
41	19	79	98	1	110	111	25	105	130	5	85	90
42	11	57	68	-	78	78	5	40	45	-	35	35
43	7	27	34	-	43	43	5	40	45	-	30	30
44	5	13	18	-	12	12	-	-	-	-	-	-
45	-	5	5	-	5	5	-	-	-	-	-	-
46	-	1	1	-	-	-	-	-	-	-	-	-
47	-	1	1	-	-	-	-	-	-	-	-	-
Total °/oo	677	318	995	522	472	994	590	410	1000	560	440	1000
Serial Numbers												
Number of Samples			5			4			1			1
Number Fish Measured			823			746			200			200
Mean Length (cm.)												
Mean Weight (kg.)												
Total Wt. Landed (Tons)			599			1269			377			236
Estimated No. (millions)												
Mesh or Hook Size												
Range of Depths (fm.)												

TABLE 47 CANADA (Newfoundland) - 1958 LENGTH FREQUENCIES - REDFISH by A.M. Fleming

OTTER TRAWLERS - Commercial Landings

Subdivision	2J							3L			3N		
Month	July-September							October-December			January-March		
	Mentella			Marinus			Grand	Mentella			Mentella		
Sex	♂♂	♀♀	Total	♂♂	♀♀	Total	Total	♂♂	♀♀	Total	♂♂	♀♀	Total
cm.	FREQUENCIES in °/oo												
19	-	-	-	-	-	-	-	-	-	-	3	-	3
20	-	-	-	-	-	-	-	-	-	-	2	5	7
21	-	-	-	-	-	-	-	-	-	-	9	5	14
22	-	-	-	-	-	-	-	-	-	-	17	13	30
23	1	-	1	-	-	-	1	-	-	-	52	22	74
24	4	4	8	-	-	-	7	8	-	8	120	41	161
25	6	2	8	-	-	-	7	8	-	8	143	27	170
26	11	5	16	-	-	-	14	24	-	24	112	51	163
27	22	7	29	-	-	-	26	12	20	32	64	39	103
28	27	16	43	2	-	2	40	12	-	12	33	62	95
29	36	16	52	-	3	3	47	12	16	28	27	35	62
30	35	30	65	3	3	6	59	57	28	85	11	36	47
31	53	37	90	3	4	7	82	32	24	56	3	14	17
32	76	25	101	1	3	4	92	45	16	61	-	14	14
33	94	27	121	3	-	3	110	57	32	89	2	9	11
34	80	23	103	2	1	3	93	89	28	117	3	16	19
35	43	29	72	6	12	18	66	85	36	121	-	4	4
36	23	38	61	15	7	22	57	73	28	101	-	6	6
37	11	37	48	19	5	24	46	16	20	36	-	1	1
38	3	43	46	28	-	28	44	20	45	65	-	-	-
39	2	42	44	16	8	24	42	-	28	28	-	-	-
40	-	30	30	28	10	38	31	-	24	24	-	-	-
41	-	32	32	22	9	31	32	-	49	49	-	-	-
42	-	18	18	37	11	48	21	-	16	16	-	-	-
43	-	4	4	27	16	43	8	-	8	8	-	1	1
44	1	5	6	49	17	66	12	-	4	4	-	-	-
45	-	2	2	41	11	52	7	-	24	24	-	-	-
46	-	1	1	70	7	77	8	-	-	-	-	-	-
47	-	-	-	29	10	39	4	-	-	-	-	-	-
48	-	-	-	64	20	84	8	-	-	-	-	-	-
49	-	-	-	20	40	60	6	-	-	-	-	-	-
50	-	-	-	37	20	57	6	-	-	-	-	-	-
51	-	-	-	9	21	30	3	-	-	-	-	-	-
52	-	1	1	3	29	32	4	-	-	-	-	-	-
53	-	-	-	7	24	31	3	-	-	-	-	-	-
>53	-	-	-	4[1]	163[2]	167	173[3]	-	-	-	-	-	-
Total °/oo	528	474	1002	545	454	999	1003	550	446	996	601	401	1002
Number of Samples							8			1			2
Number Fish Measured	3735	3506	7241	433	387	820	8061	136	111	247	377	307	684
Mean Weight (kg.)							0.72			0.70			0.29
Total Wt. Landed (Tons)							3950			34			97
Estimated No.(millions)			4.94			0.55	5.49			0.049			0.334
Mesh Size (inches) man.							2 3/4			2 3/4			2 3/4
Range of Depths (fm.)							125-200			165-170			100-120

1) 3 at 54 and 1 at 55 cm.

2) 31 at 54; 28 at 55; 58 at 56; 18 at 57; 12 at 58; 15 at 59; 1 at 60 cm.

3) 3 at 54; 3 at 55; 6 at 56; 2 at 57; 1 at 58; 2 at 59 cm.

(cont'd.)

TABLE 47 CANADA (Newfoundland) - 1958 LENGTH FREQUENCIES - REDFISH by A.M. Fleming
(cont'd.)

OTTER TRAWLERS - Commercial Landings

Subdivision	3N									3O		
Month	April-June			July-September			October-December			January-March		
	Mentella			Mentella			Mentella[1]			Mentella		
Sex	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total
cm.	FREQUENCIES in °/oo											
13	-	-	-	-	-	-	-	-	-	2	-	2
-	-	-	-	-	-	-	-	-	-	-	-	-
17	-	-	-	-	-	-	-	2	2	5	-	5
18	-	-	-	-	-	-	-	-	-	7	5	12
19	-	-	-	-	-	-	2	-	2	19	14	33
20	-	-	-	4	-	4	5	-	5	49	31	80
21	-	-	-	5	3	8	9	5	14	31	24	55
22	13	6	19	5	9	14	41	11	52	33	16	49
23	50	6	56	32	17	49	73	23	96	75	38	113
24	94	38	132	62	27	89	103	41	144	162	40	202
25	110	63	173	78	22	100	110	50	160	143	33	176
26	88	66	154	92	35	127	73	77	150	80	38	118
27	66	88	154	52	56	108	32	68	100	28	28	56
28	22	56	78	49	46	95	11	78	89	16	24	40
29	3	69	72	27	52	79	7	50	57	7	12	19
30	13	28	41	30	39	69	9	25	34	5	14	19
31	13	13	26	24	35	59	5	23	28	2	9	11
32	6	13	19	18	19	37	4	18	22	-	2	2
33	3	3	6	7	20	27	-	11	11	-	2	2
34	3	6	9	12	14	26	-	14	14	-	-	-
35	-	19	19	3	20	23	-	12	12	-	2	2
36	-	13	13	3	22	25	-	5	5	-	-	-
37	-	13	13	2	16	18	-	2	2	-	2	2
38	-	6	6	-	15	15	-	2	2	-	-	-
39	-	9	9	-	11	11	-	-	-	-	-	-
40	-	-	-	1	10	11	-	-	-	-	-	-
41	-	-	-	-	3	3	-	-	-	-	-	-
42	-	-	-	-	-	-	-	-	-	-	-	-
43	-	3	3	-	-	-	-	-	-	-	-	-
Total °/oo	484	518	1002	506	491	997	484	517	1001	664	334	998
Serial Numbers												
Number of Samples			1			2			2			1
Number Fish Measured	154	165	319	461	443	904	272	290	562	283	142	425
Mean Length (cm.)												
Mean Weight (kg.)			0.33			0.35			0.23			0.22
Total Wt. Landed (Tons)			131			504			792			101
Estimated No. (millions)			0.397			1.440			3.443			0.459
Mesh Size (inches) man.			2 3/4			2 3/4			2 3/4			2 3/4
Range of Depths (fm.)			150			160-185			150-170			110-125

1) Two marinus-type fish in samples.

(cont'd.)

TABLE 47 CANADA (Newfoundland) - 1958 LENGTH FREQUENCIES - REDFISH by A.M. Fleming
(cont'd.)

OTTER TRAWLERS - Commercial Landings

Subdivision	3O						3P south					
Month	April-June[1]			October-December			July-September			October-December[2]		
	Mentella			Mentella			Mentella			Mentella		
Sex	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total
cm.	FREQUENCIES in °/oo											
15	1	-	1	-	-	-	-	-	-	-	-	-
16	1	1	2	2	-	2	-	-	-	-	-	-
17	-	-	-	2	1	3	-	-	-	1	-	1
18	-	-	-	3	1	4	-	-	-	3	1	4
19	3	3	6	6	3	9	7	-	7	4	4	8
20	4	3	7	16	7	23	-	-	-	8	3	11
21	15	8	23	28	16	44	-	-	-	9	4	13
22	25	10	35	47	22	69	2	-	2	4	6	10
23	63	15	78	90	35	125	-	-	-	10	8	18
24	106	30	136	139	34	173	-	2	2	11	16	27
25	124	53	177	141	56	197	17	2	19	11	17	28
26	68	102	170	71	58	129	5	-	5	7	14	21
27	20	115	135	21	74	95	31	5	36	11	14	25
28	7	101	108	2	60	62	64	7	71	22	9	31
29	1	60	61	2	38	40	54	17	71	21	11	32
30	3	27	30	1	14	15	126	19	145	32	8	40
31	-	12	12	-	3	3	128	26	154	44	10	54
32	1	9	10	-	5	5	71	19	90	45	19	64
33	-	4	4	-	1	1	21	52	73	53	26	79
34	-	3	3	-	1	1	14	62	76	60	35	95
35	-	1	1	-	1	1	17	69	86	74	40	114
36	-	1	1	-	1	1	12	64	76	77	32	109
37	-	-	-	-	-	-	14	40	54	78	32	110
38	-	1	1	-	1	1	2	17	19	33	20	53
39	-	-	-	-	-	-	2	5	7	2	14	16
40	-	-	-	-	-	-	-	5	5	5	13	18
41	-	-	-	-	-	-	-	-	-	-	15	15
42	-	-	-	-	-	-	-	2	2	-	2	2
43	-	-	-	-	-	-	-	-	-	-	5	5
Total °/oo	442	559	1001	571	431	1002	587	413	1000	625	378	1003
Serial Numbers												
Number of Samples			7			5			1			10
Number Fish Measured	1100	1444	2540	694	527	1221	248	174	422	2712	2753	5465
Mean Length (cm.)												
Mean Weight (kg.)			0.27			0.18			0.48			0.53
Total Wt. Landed (Tons)			1299			386			1274			195
Estimated No. (millions)			4.811			2.144			2.654			0.368
Mesh Size (inches) man.			2 9/4			2 3/4			2 3/4			2 3/4
Range of Depths (fm.)			98-155			100-150			135-155			110-150

1) One marinus-type fish in samples.
2) 35 marinus-type fish in samples.

(cont'd.)

TABLE 47 CANADA (Newfoundland) - 1958 (cont'd.) LENGTH FREQUENCIES - REDFISH by A.M. Fleming

OTTER TRAWLERS - Commercial Landings

Subdivision	4R						4S					
Month	April-June			July-September			April-June			July-September		
	Mentella			Mentella			Mentella			Mentella		
Sex	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total
cm.	FREQUENCIES in °/oo											
16	-	-	-	-	-	-	-	1	1	-	-	-
17	-	-	-	2	-	2	1	-	1	2	-	2
18	-	-	-	-	-	-	1	2	3	-	1	1
19	-	-	-	3	2	5	-	1	1	1	1	2
20	1	-	1	2	-	2	1	-	1	-	-	-
21	-	1	1	-	-	-	1	-	1	-	-	-
22	-	-	-	-	3	3	1	-	1	-	-	-
23	1	-	1	3	3	6	2	-	2	1	1	2
24	-	1	1	11	9	20	2	-	2	1	1	2
25	1	-	1	19	9	28	3	1	4	1	1	2
26	1	-	1	23	17	40	4	3	7	6	1	7
27	-	-	-	33	17	50	6	5	11	4	1	5
28	1	2	3	47	27	74	8	4	12	4	1	5
29	4	1	5	38	27	65	8	9	17	18	6	24
30	16	-	16	27	36	63	25	8	33	22	8	30
31	31	1	32	19	52	71	52	14	66	43	16	59
32	69	4	73	28	41	69	60	39	99	92	48	140
33	97	7	104	58	23	81	58	62	120	66	80	146
34	154	9	163	81	23	104	51	71	122	62	105	167
35	157	10	167	61	17	78	48	52	100	55	51	106
36	136	18	154	44	22	66	50	40	90	38	42	80
37	44	23	67	14	45	59	28	34	62	18	42	60
38	19	55	74	6	52	58	10	67	77	6	51	57
39	3	51	54	-	31	31	5	74	79	-	44	44
40	-	51	51	-	11	11	2	50	52	1	40	41
41	1	24	25	-	9	9	1	20	21	-	17	17
42	-	7	7	-	2	2	-	11	11	-	3	3
43	-	-	-	-	2	2	-	4	4	-	1	1
44	-	-	-	-	-	-	-	2	2	-	-	-
Total °/oo	736	265	1001	519	480	999	428	574	1002	441	562	1003
Serial Numbers												
Number of Samples			2			1			2			2
Number Fish Measured	963	360	1323	331	307	638	664	879	1543	709	929	1638
Mean Length (cm.)												
Mean Weight (kg.)			0.68			0.66			0.63			0.60
Total Wt. Landed (Tons)			203			909			360			1896
Estimated No. (millions)			0.299			1.377			0.571			3.160
Mesh Size (inches) man.			2 1/4			2 3/4			2 1/4			2 1/4
Range of Depths (fm.)			150-165			130-160			139-150			130-150

TABLE 48 DENMARK (Greenland) - 1958 LENGTH FREQUENCIES - REDFISH[1] by Paul M. Hansen

SHRIMP TRAWL - Research Catches

Vessel	M/C "Adolf Jensen"				M/C "Immanuel"	
Location	Godthåb Fjord 1D				Tunugdliarfik Fjord 1F	
Month	April	May	July	October	October	November
cm.	FREQUENCIES in °/oo					
6	1	1	-	1	-	-
7	2	5	-	2	9	19
8	29	27	15	3	75	85
9	129	147	81	14	130	156
10	102	142	114	66	55	62
11	45	43	63	76	123	114
12	143	105	51	28	129	90
13	146	152	119	48	57	43
14	49	60	107	122	51	52
15	41	24	63	81	72	95
16	25	36	36	34	34	43
17	41	29	33	34	27	14
18	66	45	28	45	19	9
19	39	40	25	41	22	28
20	21	26	23	69	15	24
21	22	20	25	59	38	33
22	31	17	25	40	24	5
23	22	9	20	46	19	19
24	12	-	5	37	15	14
25	6	-	-	28	12	-
26	6	-	3	13	10	9
27	5	-	8	9	15	5
28	2	-	8	15	7	14
29	2	-	5	9	17	14
30	2	-	-	9	3	5
31	-	-	15	8	3	5
32	-	-	5	6	-	9
33	-	-	-	7	5	9
34	2	-	10	8	3	5
35	2	-	8	9	5	5
36	-	-	15	8	2	5
37	2	-	8	7	-	5
38	-	-	13	8	-	-
39	1	-	20	3	-	-
40	-	-	18	2	-	-
>40	4	-	30	7	-	5
>24[2]	-	73	-	-	-	-
Total °/oo	1000	1001	999	1002	996	1000
Number of Fish Measured	1216	1335	394	1162	583	211
Number of Hauls	2	1	2	1	2	2

1) These frequencies continue a series begun in 1952. The earlier data were published in the Sampling Yearbook Vols. 1 and 2.

2) No measurements given for 104 specimens larger than 24 cm.

TABLE 49 ICELAND - 1958 LENGTH FREQUENCIES - REDFISH[1] by Jón Jónsson

OTTER TRAWLERS - Survey Catch

Subdivision	2H			2J			3K		
Month	July			July			September		
	Mentella			Mentella			Mentella		
Sex	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total
cm.	FREQUENCIES in ‰								
26	-	-	-	3	-	3	-	-	-
27	-	-	-	-	3	3	6	-	6
28	-	-	-	7	3	10	12	-	12
29	-	-	-	-	3	3	35	18	53
30	-	10	10	7	-	7	30	6	36
31	10	-	10	13	20	33	24	12	36
32	-	10	10	23	3	26	53	35	88
33	20	-	20	47	27	74	59	12	71
34	10	20	30	66	40	106	154	12	166
35	40	-	40	100	50	150	89	24	113
36	79	10	89	93	40	133	53	35	88
37	129	10	139	86	73	159	35	18	53
38	89	10	99	43	27	70	12	65	77
39	59	30	89	50	30	80	-	65	65
40	49	40	89	17	27	44	-	30	30
41	49	59	108	20	3	23	-	53	53
42	40	10	50	17	13	30	-	24	24
43	20	49	69	-	7	7	-	18	18
44	10	40	50	3	-	3	-	-	-
45	-	20	20	-	13	13	-	12	12
46	-	30	30	-	10	10	-	-	-
47	-	10	10	-	-	-	-	-	-
48	10	-	10	-	3	3	-	-	-
49	10	-	10	-	-	-	-	-	-
50	-	20	20	-	7	7	-	-	-
Total ‰	624	378	1002	595	402	997	562	439	1001
Serial Numbers									
Number of Samples			1			1			2
Number Fish Measured	63	38	101	180	121	301	95	74	169
Mean Length (cm.)									
Mean Weight (kg.)									
Total Wt. Landed (Tons)									
Estimated No. (millions)									
Mesh Size									
Range of Depths (fm.)			220			240			154-220

(cont'd.)

1) These frequencies are based on samples taken on two exploratory cruises. Samples were taken from the catches of most drags. A copy of the original tables, which give the length frequencies of the samples individually, is filed in the Secretariat.

TABLE 49 ICELAND - 1958 (cont'd.) LENGTH FREQUENCIES - REDFISH[1] by Jón Jónsson

OTTER TRAWLERS - Survey Catch

Subdivision	2H			2J						3K		
Month	July			July			September			September		
	Marinus			Marinus			Marinus			Marinus		
Sex	♂♂	♀♀	Total[2]	♂♂	♀♀	Total[2]	♂♂	♀♀	Total[2]	♂♂	♀♀	Total[2]
cm.	FREQUENCIES in °/oo											
<25	-	-	2	-	-	1	4	4	8	1	-	1
25	1	2	3	-	-	-	2	2	7	-	-	-
26	2	2	5	1	-	1	2	2	14	1	-	1
27	3	2	6	1	-	2	-	5	17	1	-	2
28	4	3	8	3	1	4	7	4	26	2	2	4
29	5	4	12	5	2	7	11	11	41	5	3	7
30	8	5	15	7	3	9	16	9	57	7	7	13
31	5	5	14	7	4	11	16	9	48	11	4	15
32	15	8	27	17	6	23	28	14	58	13	8	20
33	25	15	48	36	12	45	49	11	77	28	8	37
34	49	23	73	59	19	75	49	18	89	54	11	69
35	62	38	112	73	26	96	42	31	102	43	11	60
36	78	40	120	68	22	95	35	21	66	48	14	65
37	86	46	125	61	40	106	40	25	66	30	22	53
38	67	38	101	41	32	75	26	34	53	17	32	52
39	49	43	82	33	44	79	19	23	36	15	31	51
40	42	36	78	26	48	72	12	29	35	12	53	71
41	28	25	42	18	42	62	12	39	37	13	40	54
42	19	24	38	15	38	49	9	23	23	16	27	40
43	15	15	28	10	26	34	9	25	26	21	26	46
44	4	10	19	7	20	25	11	7	14	17	19	33
45	4	12	16	6	16	21	16	11	11	18	15	29
46	1	7	8	6	11	17	21	11	14	22	15	35
47	1	9	8	7	9	16	18	5	9	25	14	34
48	-	3	3	5	7	12	25	4	11	24	9	32
49	-	5	4	4	5	9	25	2	10	21	13	31
50	1	3	3	4	2	7	19	4	8	15	12	26
51	-	1	1	4	2	5	12	-	5	11	8	19
52	-	1	-	1	4	7	18	4	8	10	13	22
53	-	-	-	2	4	7	9	7	6	7	14	20
54	-	-	-	-	5	6	4	5	3	3	11	14
55	-	-	-	-	6	6	2	7	4	3	11	11
56	-	-	-	-	4	5	-	7	3	1	11	11
57	-	-	-	-	1	2	2	2	2	1	7	7
58	-	1	-	-	4	4	-	7	4	-	6	6
59	-	-	-	-	1	2	-	4	1	-	3	3
60	-	-	-	-	2	2	-	2	1	-	2	2
>60	-	1	-	-	1	1	-	4	3	-	4	4
Total °/oo	574	427	1001	527	469	1000	570	432	1003	516	486	1000
Number of Samples	19	19	27	23	23	28	3	3	7	23	23	28
Number Fish Measured	1995	1471	5416	2155	1924	5184	323	246	1554	2239	2134	5493
Range of Depths (fm.)		180-270			150-285			160-200			150-195	

1) These frequencies are based on samples taken on two exploratory cruises. Samples were taken from the catches of most drags. A copy of the original tables, which give the length frequencies of the samples individually, is filed in the Secretariat.

2) Additional samples - not sexed - were used in compiling the total length frequency.

TABLE 50 UNION OF SOVIET SOCIALIST REPUBLICS - 1958 LENGTH FREQUENCIES - REDFISH

by V.I. Travin
J. Marti

OTTER TRAWLERS - Exploratory Catches

Subdivision	1C									
Month	April		May		June		July		August	
	Marinus		Marinus		Marinus		Marinus		Marinus	
Sex	♂♂	♀♀	♂♂	♀♀	♂♂	♀♀	♂♂	♀♀	♂♂	♀♀
2-cm. group	FREQUENCIES in °/oo									
30	10	7	7	4	11	9	-	-	2	2
31-32	21	16	6	22	8	13	-	-	2	2
33-34	41	22	9	10	13	19	-	-	2	2
35-36	94	90	48	42	36	66	30	19	3	3
37-38	115	128	75	82	138	180	44	47	11	13
39-40	143	197	123	133	140	175	41	59	24	33
41-42	212	228	159	152	108	113	37	31	59	49
43-44	123	163	121	118	122	103	48	62	102	91
45-46	70	52	168	156	129	140	137	113	83	78
47-48	29	9	78	82	82	51	56	70	76	76
49-50	13	17	51	48	49	33	145	141	63	62
51-52	10	7	16	24	45	35	93	109	64	68
53-54	6	5	15	9	25	20	137	145	75	77
55-56	10	2	20	22	28	16	56	51	57	58
57-58	11	7	24	13	23	10	74	90	50	53
59-60	21	7	3	16	15	4	44	35	49	49
>60	71	42	73	59	27	12	56	26	280	281
Total °/oo	1000	999	996	992	999	999	998	998	1002	997
Number Fish Measured	617	577	943	671	1947	1222	269	256	5774	5106
Average Size (cm.)	42.63	41.59	44.77	44.39	44.10	42.27	49.35	49.35	52.43	52.55
Percentage of Total	51.7	48.3	58.4	41.6	61.5	38.5	51.2	48.8	53.1	46.9

(cont'd.)

TABLE 50 UNION OF SOVIET SOCIALIST REPUBLICS - 1958 (cont'd.) LENGTH FREQUENCIES - REDFISH by V.I. Travin J. Marti

OTTER TRAWLERS - Exploratory (Commercial) Catches

Subdivision	2J										3K	
Month	August		September		October		November		December		October	
	Mentella		Mentella		Mentella		Mentella		Mentella		Mentella	
Sex	♂♂	♀♀	♂♂	♀♀	♂♂	♀♀	♂♂	♀♀	♂♂	♀♀	♂♂	♀♀
2-cm. group	FREQUENCIES in °/oo											
21-22	-	1	-	1	1	3	-	1	-	-	-	-
23-24	2	6	1	4	3	6	1	1	1	1	-	1
25-26	10	20	15	20	10	17	9	5	3	3	8	7
27-28	33	39	42	56	46	57	30	14	19	6	32	27
29-30	45	29	94	75	83	71	80	25	63	22	62	46
31-32	170	65	335	146	367	158	172	63	136	41	138	82
33-34	265	72	282	85	283	115	240	63	281	42	178	108
35-36	276	109	182	118	174	111	285	111	385	70	311	203
37-38	164	181	43	132	25	132	123	142	96	92	144	168
39-40	28	176	6	172	7	163	42	215	15	230	57	143
41-42	6	182	-	121	1	110	13	194	1	259	48	132
43-44	1	86	-	48	-	40	3	85	-	145	17	58
45-46	-	27	-	18	-	12	1	62	-	65	5	22
47-48	-	6	-	4	-	4	-	14	-	10	-	3
49-50	-	1	-	-	-	1	-	4	-	3	-	-
>50	-	-	-	-	-	-	-	1	-	-	-	-
Total °/oo	1000	1000	1000	1000	1000	1000	999	1000	1000	989	1000	1000
Number Fish Measured	3959	4481	4691	7723	1922	3061	5863	5474	4156	2968	9943	13189
Average Size (cm.)	34.11	37.53	32.64	35.88	32.53	35.51	34.04	38.63	34.08	39.70	34.87	36.80
Percentage of Total	46.9	53.1	37.8	62.2	36.6	63.4	51.7	48.3	58.3	41.7	43.0	57.0
Tot. Wt. Landed(Tons)	377		9260		2303		377		516		14629	

(cont'd.)

TABLE 50 UNION OF SOVIET SOCIALIST REPUBLICS - 1958 (cont'd.) LENGTH FREQUENCIES -- REDFISH

by V.I. Travin
J. Marti

OTTER TRAWLERS - Exploratory (Commercial) Catches

Subdivision	3K				3L							
Month	November		December		April		August		September		December	
	Mentella		Mentella		Mentella		Mentella		Mentella		Mentella	
Sex	♂♂	♀♀	♂♂	♀♀	♂♂	♀♀	♂♂	♀♀	♂♂	♀♀	♂♂	♀♀
2-cm. group	FREQUENCIES in °/oo											
21-22	-	-	-	-	-	-	-	-	-	1	-	-
23-24	1	1	2	6	1	-	-	-	6	6	-	1
25-26	6	12	10	28	3	2	3	6	25	57	4	6
27-28	37	54	30	28	14	10	10	12	67	77	4	7
29-30	76	65	96	67	25	13	49	38	139	103	38	31
31-32	161	103	149	63	127	29	173	88	239	103	140	80
33-34	194	145	233	67	299	49	172	89	215	101	170	99
35-36	280	187	354	107	311	98	297	163	220	133	288	151
37-38	140	120	89	111	135	205	134	132	62	83	134	126
39-40	62	118	30	229	39	200	101	185	21	146	145	197
41-42	42	102	2	160	26	191	42	130	3	93	46	130
43-44	-	72	1	71	8	128	12	78	1	61	28	87
45-46	-	20	1	46	1	54	7	65	2	31	6	59
47-48	-	1	-	8	-	15	-	11	-	4	-	25
49-50	-	-	1	5	-	3	-	2	-	1	-	6
>50	-	-	-	-	-	1	-	1	-	-	-	1
Total °/oo	999	1000	998	996	989	998	1000	1000	1000	1000	1003	1006
Number Fish Measured	2957	3606	2754	4043	3528	4651	5226	9448	879	1707	2090	5119
Average Size (cm.)	34.42	35.96	33.84	37.42	34.74	38.27	34.71	37.37	32.68	34.16	35.71	38.11
Percentage of Total	45.1	54.9	40.5	59.5	43.1	56.9	35.6	64.4	34.0	66.0	19.0	71.0
Tot.Wt. Landed (Tons)	5804		14523		5668		556		1154		128	

(cont'd.)

TABLE 50 (cont'd.) UNION OF SOVIET SOCIALIST REPUBLICS - 1958 — LENGTH FREQUENCIES - REDFISH — by V.I. Travin, J. Marti

OTTER TRAWLERS - Exploratory (Commercial) Catches

Subdivision	3M											
Month	March		April		May		August		September		December	
	Mentella		Mentella		Mentella		Mentella		Mentella		Mentella	
Sex	♂♂	♀♀	♂♂	♀♀	♂♂	♀♀	♂♂	♀♀	♂♂	♀♀	♂♂	♀♀
2-cm. group	FREQUENCIES in °/oo											
21-22	1	2	-	-	-	-	-	-	-	-	-	-
23-24	2	4	1	2	2	3	1	1	-	-	2	3
25-26	17	17	8	13	46	27	6	10	7	12	8	10
27-28	66	49	50	42	132	94	45	41	28	34	18	38
29-30	102	70	115	90	182	121	229	166	147	102	115	101
31-32	230	124	211	132	253	148	244	196	224	133	291	142
33-34	237	148	274	149	229	182	173	157	202	138	335	145
35-36	238	229	246	211	118	171	208	186	261	233	202	285
37-38	76	174	82	147	32	173	61	109	85	155	26	175
39-40	24	105	13	123	4	62	27	95	37	130	3	85
41-42	7	54	-	75	-	15	5	29	5	41	-	8
43-44	1	18	-	12	-	2	-	9	2	17	-	8
45-46	-	4	-	3	-	-	-	2	1	7	-	-
Total °/oo	1001	998	1000	999	998	998	999	1001	999	1002	1000	1000
Number Fish Measured	7939	8503	1700	2251	2029	2431	5472	8152	8915	12253	1133	1432
Average Size (cm.)	33.06	34.93	33.14	35.01	31.45	33.43	32.63	33.83	33.40	34.07	32.67	34.40
Percentage of Total	48.3	51.7	43.0	57.0	45.5	54.5	40.2	59.8	42.1	57.9	44.2	55.8
Tot. Wt. Landed(Tons)	6945		934		3396		8828		244		8	

TABLE 51 UNITED STATES - 1958 LENGTH FREQUENCIES - REDFISH by G.F. Kelly, A.M. Barker and G.M. Clarke

OTTER TRAWLERS - Commercial Landings Subdivision 2J

Month	August			September			October		
Sex	M	F	Total	M	F	Total	M	F	Total
cm.	Frequencies in o/oo								
23				2		2			
4				--		--			
5	5		5	--		--			
6	--		--	2		2			
7	--		--	--		--	10	10	20
8	--	10	10	2	2	4	--	30	30
9	5	--	5	6	4	10	--	20	20
30	5	--	5	2	6	8	20	20	40
1	10	10	20	12	4	16	30	--	30
2	15	--	15	20	2	22	20	20	40
3	35	15	50	34	6	40	80	30	110
4	30	10	40	28	6	34	130	30	160
5	50	5	55	16	10	26	40	40	80
6	15	10	25	22	14	36	40	40	80
7	15	10	25	14	26	40	10	30	40
8	10	20	30	12	22	34	20	90	110
9	45	5	50	16	42	58		80	80
40	10	5	15	20	16	36		50	50
1	10	35	45	20	28	48		40	40
2	10	20	30	18	26	44		10	10
3	30	--	30	24	16	40		10	10
4	85	15	100	20	18	38		--	--
5	30	5	35	40	14	54		--	--
6	40	20	60	32	4	36		--	--
7	60	--	60	42	12	54		10	10
8	35	15	50	34	10	44		--	--
9	15	15	30	24	26	50		--	--
50	10	25	35	20	28	48		10	10
1	15	15	30	14	22	36		10	10
2	5	20	25	8	20	28		10	10
3	5	25	30		16	16		--	--
4	--	15	15		16	16		10	10
5	5	10	15		22	22			
6		25	25		14	14			
7		15	15		12	12			
8		10	10		12	12			
9		--	--		4	4			
60		--	--		6	6			
> 60		10	10		10	10			
Total o/oo	605	395	1,000	504	496	1,000	400	600	1,000
No. Fish Measured	121	79	200	252	248	500	40	60	100

(cont'd.)

TABLE 51 UNITED STATES - 1958 LENGTH FREQUENCIES - REDFISH by G.F. Kelly, A.M. Barker and G.M. Clarke
(cont'd.)
OTTER TRAWLERS - Commercial Landings Subdivisions 3N-O-P

Month	January			February			March		
Sex	M	F	Total	M	F	Total	M	F	Total
cm.	FREQUENCIES in °/oo								
16									
7								2	2
8				3		3		--	--
9	15		15	7		7	5	2	7
20	20	5	25	3	3	6	2	2	4
1	10	15	25	3	3	6	13	5	18
2	65	20	85	23	20	43	30	10	40
3	65	50	115	60	20	80	70	20	90
4	80	30	110	134	60	194	123	35	158
5	100	70	170	124	43	167	90	73	163
6	60	65	125	83	63	146	78	48	126
7	65	30	95	50	67	117	40	65	105
8	10	35	45	27	20	47	25	45	70
9	10	35	45	30	20	50	40	35	75
30	10	35	45	10	40	50	10	33	43
1	--	20	20	3	27	30	8	18	26
2	10	20	30		10	10	5	23	28
3		5	5		7	7	5	10	15
4		15	15		7	7		13	13
5		15	15		10	10		8	8
6		10	10		17	17		2	2
7		--	--					5	5
8		5	5					--	--
9								--	--
40								5	5
1									
2									
3									
Total	520	480	1,000	560	437	997	544	459	1,003
No. fish measured	104	96	200	168	132	300	217	183	400

(cont'd.)

TABLE 51 UNITED STATES - 1958 LENGTH FREQUENCIES - REDFISH by G.F. Kelly, A.M. Barker and G.M. Clarke
(cont'd.)
OTTER TRAWLERS - Commercial Landings Subdivisions 3N-O-P

Month	May			August			September		
Sex	M	F	Total	M	F	Total	M	F	Total
cm.	FREQUENCIES in °/oo								
16							1		1
7							2		2
8							8		8
9	5	5	10				11		11
20	8	5	13				20	5	25
1	18	8	26	10	10	20	32	10	42
2	34	13	47	60	10	70	73	20	93
3	70	15	85	40	20	60	91	24	115
4	150	50	200	100	60	160	113	44	157
5	122	72	194	10	20	30	58	63	121
6	60	108	168	30	50	80	30	47	77
7	15	98	113	20	20	40	31	83	114
8	8	53	61	--	50	50	10	52	62
9	--	23	23	20	80	100	9	41	50
30	--	13	13	--	30	30	6	29	35
1	2	2	4	30	30	60	1	17	18
2		8	8	10	40	50	1	16	17
3		8	8	10	40	50		9	9
4		2	2	10	60	70		10	10
5		8	8		20	20		5	5
6		5	5		30	30		10	10
7		13	13		60	60		10	10
8		2	2		20	20		4	4
9								--	--
40								1	1
1								1	1
2								--	--
3							1		1
Total °/oo	492	511	1,003	350	650	1,000	498	501	999
No. Fish Measured	197	203	400	35	65	100	399	401	800

(cont'd.)

TABLE 51 UNITED STATES - 1958 LENGTH FREQUENCIES - REDFISH by G.F. Kelly, A.M. Barker and G.M. Clarke
(cont'd.)
OTTER TRAWLERS - Commercial Landings Subdivisions 3N-O-P

Month	October			November			December		
Sex	M	F	Total	M	F	Total	M	F	Total
cm.	FREQUENCIES in °/oo								
16									
7								5	5
8	3		3	2		2	3	2	5
9	2		2	10	2	12	5	5	10
20	8	3	11	10	8	18	17	7	24
1	23	3	26	10	4	14	32	23	55
2	23	7	30	28	14	42	57	27	84
3	58	22	80	66	18	84	73	23	96
4	65	25	90	140	34	174	139	42	181
5	57	53	110	130	50	180	94	70	164
6	77	35	112	68	72	140	53	47	100
7	63	50	113	18	66	84	27	45	72
8	45	50	95	10	46	56	5	45	50
9	28	53	81	8	52	60	3	40	43
30	13	53	66	2	34	36	7	15	22
1	10	37	47	4	24	28		34	34
2	7	32	39		24	24		17	17
3	3	25	28		10	10		12	12
4	2	18	20		18	18		13	13
5	--	10	10		6	6		7	7
6	2	12	14		8	8		2	2
7		5	5		4	4		7	7
8		8	8						
9		3	3						
40		--	--						
1		3	3						
2		--	--						
3		2	2						
Total	489	509	998	506	494	1,000	515	488	1,003
No. fish measured	294	306	600	253	247	500	308	292	600

(cont'd.)

TABLE 51 UNITED STATES - 1958 LENGTH FREQUENCIES - REDFISH by G.F. Kelly, A.M. Barker and G.M. Clarke
(cont'd.)
OTTER TRAWLERS - Commercial Landings Subdivisions 4R-S-T

Month	May			June			July		
Sex	M	F	Total	M	F	Total	M	F	Total
cm.	FREQUENCIES in °/oo								
15									
6				1		1			
7				--		--	3	1	4
8				--		--	4	--	4
9				--		--	3	3	6
20				--	3	3	3	1	4
1				--	--	--	3	1	4
2				1	3	4	3	--	3
3		3	3	14	6	20	4	4	8
4	17	3	20	4	6	10	13	6	19
5	3	10	13	20	7	27	20	11	31
6	17	10	27	20	19	39	26	11	37
7	30	10	40	34	24	58	26	16	42
8	27	3	30	51	30	81	37	20	57
9	17	30	47	9	39	48	33	26	59
30	20	20	40	26	54	80	36	54	90
1	70	40	110	47	56	103	56	61	117
2	53	57	110	61	49	110	40	86	126
3	47	43	90	37	54	91	23	96	119
4	53	23	76	19	30	49	19	41	60
5	13	37	50	26	40	66	36	14	50
6	10	27	37	9	36	45	11	20	31
7	3	70	73	4	39	43	9	31	40
8	3	77	80		50	50	1	40	41
9		67	67		37	37	1	27	28
40		53	53		17	17		11	11
1		30	30		17	17		4	4
2		--	--		1	1		1	1
3		3	3						
4									
5									
Total	383	616	999	383	617	1,000	410	586	996
No. fish measured	115	185	300	269	431	700	286	414	700

(cont'd.)

TABLE 51 UNITED STATES - 1958 LENGTH FREQUENCIES - REDFISH by G.F. Kelly, A.M. Barker and G.M. Clarke
(cont'd.)
OTTER TRAWLERS - Commercial Landings Subdivisions 4R-S-T

Month	August			September		
Sex	M	F	Total	M	F	Total
cm.	FREQUENCIES in °/oo					
15					5	5
6				10	--	10
7				--	--	--
8				10	--	10
9				15	--	15
20				10	10	20
1				--	--	--
2				5	--	5
3		7	7	5	--	5
4	10	--	10	10	20	30
5	7	3	10	10	--	10
6	13	7	20	35	25	60
7	27	--	27	45	65	110
8	23	7	30	20	30	50
9	20	23	43	25	50	75
30	50	13	63	30	45	75
1	77	27	104	30	50	80
2	80	67	147	30	60	90
3	67	60	127	30	90	120
4	53	43	96	10	40	50
5	47	20	67	10	25	35
6	40	37	77	15	20	35
7	20	40	60	5	20	25
8	--	30	30	5	30	35
9	--	33	33		25	25
40	--	33	33		20	20
1	3	10	13		--	--
2		3	3		--	--
3					--	--
4					--	--
5					5	5
Total °/oo	537	463	1,000	365	635	1,000
No. Fish Measured	161	139	300	73	127	200

(cont'd.)

TABLE 51 UNITED STATES - 1958 LENGTH FREQUENCIES - REDFISH by G.F. Kelly, A.M. Barker and G.M. Clarke
(cont'd.)
OTTER TRAWLERS - Commercial Landings Subdivisions 4V-W-X

Month	January			February			March		
Sex	M	F	Total	M	F	Total	M	F	Total
cm.	Frequencies in o/oo								
13									
4									
5									
6							7		7
7	5		5				7	7	14
8	5	5	10	3	3	6	7	3	10
9	--	--	--	13	2	15	17	10	27
20	25	10	35	25	13	38	17	33	50
1	80	15	95	33	27	60	47	30	77
2	60	45	105	58	27	85	80	47	127
3	60	45	105	45	33	78	83	60	143
4	65	100	165	68	43	111	73	67	140
5	55	65	120	77	37	114	63	73	136
6	40	20	60	60	45	105	30	47	77
7	20	50	70	47	43	90	20	27	47
8	20	45	65	23	42	65	23	27	50
9	5	45	50	25	30	55	3	30	33
30	5	45	50	15	43	58		23	23
1		10	10	2	47	49		3	3
2		30	30	--	28	28		20	20
3		10	10	2	13	15		10	10
4		--	--		15	15		3	3
5		15	15		5	5		--	--
6					--	--		--	--
7					2	2		--	--
8					2	2		3	3
9					--	--			
40					2	2			
1					2	2			
Total	445	555	1,000	496	504	1,000	477	523	1,000
No. fish measured	89	111	200	298	302	600	143	157	300

(cont'd.)

TABLE 51 UNITED STATES - 1958 LENGTH FREQUENCIES - REDFISH by G.F. Kelly, A.M. Barker and G.M. Clarke
(cont'd.)
OTTER TRAWLERS - Commercial Landings . Subdivisions 4V-W-X

Month	April			May			June		
Sex	M	F	Total	M	F	Total	M	F	Total
cm.	FREQUENCIES in °/oo								
13									
4	1		1		1	1			
5	--		--	1	--	1	1		1
6	3		3	2	1	3	1	1	2
7	9	1	10	7	2	9	1	4	5
8	10	9	19	11	9	20	3	4	7
9	24	13	37	20	15	35	5	8	13
20	34	27	61	31	27	58	25	6	31
1	67	53	120	37	29	66	24	12	36
2	87	57	144	44	29	73	45	18	63
3	74	70	144	53	37	90	74	29	103
4	46	87	133	51	43	94	56	48	104
5	26	89	115	47	58	105	48	50	98
6	17	44	61	46	59	105	31	65	96
7	10	47	57	25	65	90	28	51	79
8	7	33	40	21	61	82	20	48	68
9	1	21	22	8	34	42	17	52	69
30		13	13	11	33	44	17	39	56
1		9	9	10	17	27	14	23	37
2		3	3	8	19	27	10	24	34
3		7	7	2	11	13	2	14	16
4				1	5	6	4	15	19
5					1	1	3	12	15
6					5	5		9	9
7					1	1		15	15
8					3	3		11	11
9					--	--		5	5
40					1	1		1	1
1								4	4
2								1	1
3								--	--
4								1	1
5								--	--
6								--	--
7								--	--
8								--	--
9								--	--
50								--	--
1								1	1
Total	416	583	999	436	566	1,002	429	571	1,000
No. fish measured	292	408	700	653	847	1,500	429	571	1,000

(cont'd.)

TABLE 51 UNITED STATES - 1958 LENGTH FREQUENCIES - REDFISH by G.F. Kelly, A.M. Barker and G.M. Clarke
(cont'd.)
OTTER TRAWLERS - Commercial Landings Subdivisions 4V-W-X

Month	July			August			September		
Sex	M	F	Total	M	F	Total	M	F	Total
cm.	Frequencies in o/oo								
13	1		1						
4	--		--	1		1			
5	1		1	1	1	2	1		1
6	3	1	4	1	--	1	3	2	5
7	3	2	5	6	3	9	6	1	7
8	5	6	11	6	5	11	15	8	23
9	10	9	19	11	12	23	24	21	45
20	20	17	37	26	17	43	30	36	66
1	44	30	74	38	28	66	48	51	99
2	64	32	96	76	31	107	77	49	126
3	80	47	127	97	42	139	70	48	118
4	78	53	131	87	62	149	59	55	114
5	66	58	124	68	63	131	52	75	127
6	42	54	96	37	71	108	18	58	76
7	18	61	79	17	59	76	9	52	61
8	11	48	59	8	50	58	6	30	36
9	3	46	49	3	22	25	2	19	21
30	4	30	34	2	21	23	6	12	18
1	3	18	21	1	7	8	6	5	11
2	--	12	12		4	4	5	3	8
3	1	9	10		9	9	6	3	9
4		7	7		2	2	1	3	4
5		2	2		3	3		6	6
6		2	2					9	9
7		1	1					5	5
8		1	1					5	5
9								2	2
40								1	1
1									
2									
3									
4									
5									
6									
7									
8									
9									
50									
Total o/oo	457	546	1,003	486	512	998	444	559	1,003
No. Fish Measured	915	1085	2,000	730	770	1,500	486	614	1,100

(cont'd.)

TABLE 51 UNITED STATES - 1958 LENGTH FREQUENCIES - REDFISH by G.F. Kelly, A.M. Barker and G.M. Clarke
(cont'd.)
OTTER TRAWLERS - Commercial Landings Subdivisions 4V-W-X

Month	October			November			December		
Sex	M	F	Total	M	F	Total	M	F	Total
cm.	Frequencies in o/oo								
15							5		5
6	1	3	4	5		5	10	8	18
7	7	2	9	10		10	22	17	39
8	4	18	22	5	5	10	15	10	25
9	29	18	47	5	5	10	53	50	103
20	52	41	93	20	10	30	92	63	155
1	80	42	122	45	30	75	118	67	185
2	90	58	148	65	40	105	87	65	152
3	74	46	120	65	45	110	65	50	115
4	42	57	99	70	65	135	43	63	106
5	29	74	103	75	55	130	17	40	57
6	6	83	89	40	80	120		15	15
7	4	56	60	25	65	90		13	13
8	1	31	32	5	75	80	5	5	10
9		26	26		50	50		2	2
30		13	13		20	20			
1		8	8		15	15			
2		3	3		5	5			
3		1	1						
Total	419	580	999	435	565	1,000	532	468	1,000
No. fish measured	378	522	900	87	113	200	213	187	400

(cont'd.)

TABLE 51 UNITED STATES - 1958 LENGTH FREQUENCIES - REDFISH by G.F. Kelly, A.M. Barker and G.M. Clarke
(cont'd.)
OTTER TRAWLERS - Commercial Landings · Subdivisions 5Y-Z

Month	January			February			March		
Sex	M	F	Total	M	F	Total	M	F	Total
cm.	FREQUENCIES in °/oo								
11					1	1			
2					--	--			
3					--	--			
4				1	--	1			
5				1	1	2		2	2
6	1		1	3	2	5	3	1	4
7	--		--	7	1	8	5	5	10
8	1	1	2	8	5	13	8	9	17
9	4	--	4	16	8	24	17	13	30
20	3	3	6	21	16	37	29	20	49
1	6	7	13	21	32	53	26	31	57
2	26	13	39	34	24	58	40	29	69
3	35	24	59	39	25	64	43	31	74
4	55	20	75	40	25	65	47	36	83
5	69	26	95	57	27	84	52	41	93
6	74	50	124	88	44	132	47	32	79
7	79	51	130	77	51	128	45	39	84
8	51	66	117	31	46	77	42	33	75
9	26	59	85	23	43	66	24	27	51
30	15	65	80	9	39	48	19	26	45
1	1	42	43	5	35	40	9	23	32
2	--	39	39	1	29	30	4	26	30
3	1	32	33	--	25	25	1	26	27
4		35	35	--	27	27		24	24
5		7	7	1	11	12		26	26
6		10	10		3	3		16	16
7		--	--					14	14
8		1	1					7	7
9								3	3
40								1	1
Total	447	551	998	483	520	1,003	461	541	1,002
No. fish measured	358	442	800	722	778	1,500	1194	1406	2,600

(cont'd.)

TABLE 51 UNITED STATES - 1958 LENGTH FREQUENCIES - REDFISH by G.F. Kelly, A.M. Barker and G.M. Clarke
(cont'd.)
OTTER TRAWLERS - Commercial Landings . Subdivisions 5Y-Z

Month	April			May			June		
Sex	M	F	Total	M	F	Total	M	F	Total
cm.	FREQUENCIES in °/oo								
15	1	1	2				1		1
6	2	3	5				--		--
7	4	5	9	1		1	--		--
8	11	7	18	1	2	3	2	1	3
9	13	10	23	7	5	12	3	3	6
20	18	16	34	8	10	18	7	6	13
1	16	25	41	16	12	28	16	12	28
2	30	24	54	23	20	43	25	15	40
3	32	33	65	34	15	49	44	30	74
4	47	31	78	36	25	61	54	22	76
5	75	33	108	72	22	94	87	31	118
6	79	44	123	90	39	129	103	59	162
7	67	39	106	77	47	124	64	61	125
8	55	44	99	52	69	121	43	66	109
9	27	37	64	24	55	79	18	47	65
30	13	23	36	9	48	57	7	44	51
1	3	27	30	1	47	48	1	46	47
2	1	31	32	2	32	34		31	31
3	--	24	24	1	31	32		21	21
4	1	21	22		27	27		15	15
5		12	12		19	19		7	7
6		4	4		7	7		3	3
7		5	5		5	5		1	1
8		1	1		7	7		1	1
9		1	1		2	2			
40					1	1			
Total °/oo	495	501	996	454	547	1,001	475	522	997
No. Fish Measured	1348	1352	2,700	590	710	1,300	997	1,103	2,100

(cont'd.)

TABLE 51 UNITED STATES - 1958 LENGTH FREQUENCIES - REDFISH by G.F. Kelly, A.M. Barker and G.M. Clarke
(cont'd.)
OTTER TRAWLERS - Commercial Landings Subdivisions 5Y-Z

Month	July			August			September		
Sex	M	F	Total	M	F	Total	M	F	Total
cm.	Frequencies in o/oo								
13				1		1			
4				1		1			
5				1		1			
6				2	1	3			
7		1	1	10	3	13	1		1
8	2	1	3	15	4	19	4		4
9	2	3	5	18	10	28	3	1	4
20	5	4	9	32	15	47	9	9	18
1	11	10	21	39	29	68	22	16	38
2	15	20	35	44	42	86	22	20	42
3	20	24	44	46	42	88	32	25	57
4	50	24	74	69	43	112	42	32	74
5	79	38	117	52	43	95	70	38	108
6	82	51	133	55	42	97	76	39	115
7	74	53	127	34	52	86	81	41	122
8	50	46	96	19	45	64	58	60	118
9	39	55	94	8	48	56	24	58	82
30	17	49	66	2	35	37	15	46	61
1	3	35	38	1	28	29	7	41	48
2	--	34	34	1	22	23	2	33	35
3	--	32	32		13	13	1	35	36
4	--	36	36		17	17		22	22
5	1	15	16		10	10		8	8
6		13	13		4	4		5	5
7		3	3		1	1		1	1
8		5	5		1	1		--	--
9					1	1		1	1
Total	450	552	1,002	450	551	1,001	469	531	1,000
No. fish measured	495	605	1,100	902	1,098	2,000	796	904	1,700

(cont'd.)

TABLE 51 UNITED STATES - 1958 LENGTH FREQUENCIES - REDFISH by G.F. Kelly, A.M. Barker and G.M. Clarke
(cont'd.)
OTTER TRAWLERS - Commercial Landings Subdivisions 5Y-Z

Month	October			November			December		
Sex	M	F	Total	M	F	Total	M	F	Total
cm.	Frequencies in o/oo								
16				4		4			
7				6		6	2	2	4
8	2		2	16		16	2	--	2
9	--		--	6	14	20	--	2	2
20	12	6	18	10	2	12	14	2	16
1	12	4	16	18	12	30	12	12	24
2	12	18	30	38	32	70	26	16	42
3	28	30	58	60	24	84	48	34	82
4	34	36	70	44	26	70	40	28	68
5	48	18	66	48	54	102	44	40	84
6	86	44	130	68	30	98	54	22	76
7	78	66	144	46	46	92	68	30	98
8	64	56	120	44	28	72	52	32	84
9	36	70	106	22	40	62	60	44	104
30	14	54	68	20	38	58	22	42	64
1	4	46	50	4	52	56	8	38	46
2	2	44	46	2	48	50	2	44	46
3	2	48	50		48	48	2	32	34
4	2	12	14		40	40		48	48
5		10	10		8	8		32	32
6		2	2		2	2		28	28
7								12	12
8								2	2
9								2	2
Total	436	564	1,000	456	544	1,000	456	544	1,000
No. fish measured	218	282	500	228	272	500	228	272	500

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Guide to Tables

The numbers in the guide are page numbers. For a length frequency reference the page number alone is given. For an age frequency the page number is followed by A. For an age frequency with mean size at each age, the page number is followed by A'. For an age/length key or frequency the page number is followed by K. For a weight/length table the page number is followed by W. For discard experiments the page number is followed by D.

PAGE NUMBERS

Subdivision	January-March	April-June	July-September	October-December
3L		167	167	
3N	167		168	168

TABLE 52 CANADA (Nfld.) - 1958 LENGTH FREQUENCIES - AMERICAN PLAICE by A.M. Fleming

OTTER TRAWLERS - Commercial Landings

Subdivision	3L						3N		
Quarter	April-June			July-September			January-March		
Sex	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total
cm.	FREQUENCIES in °/oo								
27	-	-	-	-	-	-	1	-	1
28	1	-	1	-	-	-	3	-	3
29	1	1	2	-	-	-	6	1	7
30	4	2	6	2	-	2	7	8	15
31	7	2	9	-	1	1	9	2	11
32	13	3	16	-	3	3	12	7	19
33	17	5	22	3	3	6	14	10	24
34	21	6	27	8	2	10	25	14	39
35	29	9	38	11	6	17	29	13	42
36	33	16	49	10	7	17	32	21	53
37	35	20	55	11	13	24	37	17	54
38	45	17	62	11	8	19	31	19	50
39	41	22	63	17	14	31	38	22	60
40	53	20	73	26	21	47	48	23	71
41	45	19	64	24	23	47	52	16	68
42	45	24	69	49	36	85	45	7	52
43	39	20	59	37	15	52	36	18	54
44	42	16	58	37	26	63	43	19	62
45	28	18	46	39	29	68	31	16	47
46	20	27	47	36	40	76	34	12	46
47	16	22	38	25	30	55	27	16	43
48	5	19	24	7	46	53	25	11	36
49	2	20	22	7	46	53	8	15	23
50	2	21	23	6	34	40	7	10	17
51	-	18	18	-	38	38	1	9	10
52	-	17	17	-	36	36	1	13	14
53	-	16	16	-	33	33	-	15	15
54	-	17	17	-	25	25	1	8	9
55	-	15	15	-	18	18	-	12	12
56	-	9	9	-	28	28	-	7	7
57	-	9	9	-	19	19	-	8	8
58	-	7	7	-	12	12	-	9	9
59	-	5	5	-	14	14	-	9	9
60	-	4	4	-	1	1	-	3	3
61	-	2	2	-	-	-	-	3	3
62	-	1	1	-	-	-	-	1	1
>62	-	6	6	-	1	1	-	5	5
Total °/oo	544	455	999	366	628	994	603	399	1002
Number of Samples			15			3			4
Number Fish Measured	2029	1750	3779	254	436	690	651	432	1083
Mean Weight (kg.)			0.77			1.01			0.79
Total Wt. Landed (Tons)			3096			1958			325
Estimated No. (millions)			4.021			1.939			0.411
Mesh Size (inches) man.			4			4			4
Range of Depths (fm.)			44-87			65-98			50-120

(cont'd.)

TABLE 52 CANADA (Nfld.) - 1958 LENGTH FREQUENCIES - AMERICAN PLAICE by A.M. Fleming (cont'd.)

OTTER TRAWLERS - Commercial Landings

Subdivision	3N					
Quarter	July-September			October-December		
Sex	♂♂	♀♀	Total	♂♂	♀♀	Total
cm.	FREQUENCIES in °/oo					
26	1	1	2	1	1	2
27	-	2	2	2	1	3
28	2	2	4	5	2	7
29	1	1	2	3	3	6
30	5	3	8	13	7	20
31	10	7	17	13	9	22
32	12	11	23	24	10	34
33	25	15	40	24	12	36
34	27	25	52	28	17	45
35	37	24	61	32	17	49
36	42	31	73	33	18	51
37	36	22	58	32	18	50
38	41	22	63	40	20	60
39	52	21	73	36	10	46
40	40	19	59	42	15	57
41	50	24	74	40	15	55
42	42	19	61	29	19	48
43	36	24	60	42	19	61
44	31	23	54	30	19	49
45	21	19	40	22	19	41
46	20	17	37	22	19	41
47	15	16	31	17	25	42
48	5	14	19	10	14	24
49	5	13	18	4	13	17
50	1	8	9	3	14	17
51	1	11	12	2	18	20
52	-	7	7	1	19	20
53	1	8	9	-	7	7
54	1	5	6	1	14	15
55	-	7	7	-	9	9
56	-	5	5	-	8	8
57	-	6	6	-	13	13
58	-	3	3	-	11	11
59	-	2	2	-	7	7
60	-	1	1	-	2	2
61	-	4	4	-	3	3
62	-	-	-	-	1	1
>62	-	1	1	-	4	4
Total °/oo	560	443	1003	551	452	1003
Number of Samples			8			6
Number Fish Measured	1113	883	1996	779	650	1429
Mean Weight (kg.)			0.68			0.79
Total Wt. Landed (Tons)			1267			2392
Estimated No. (millions)			1.863			3.028
Mesh Size (inches) man.			4			4
Range of Depths (fm.)			24-95			34-75